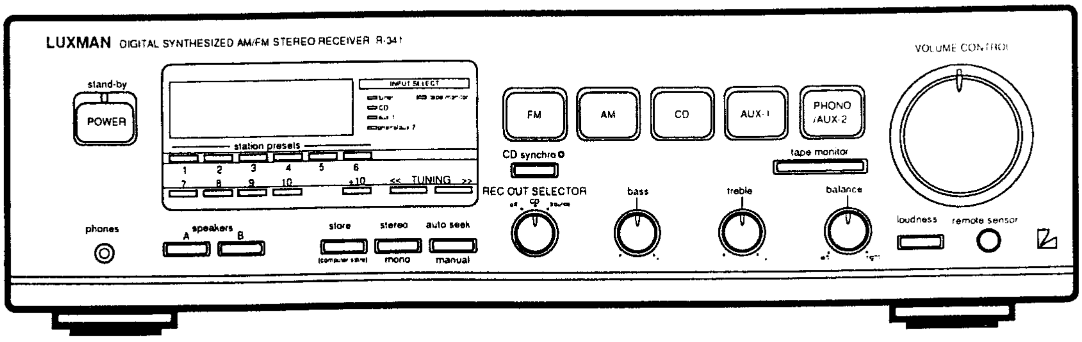
SERVICE MANUAL

Digital Synthesized AM/FM Stereo Receiver

R-341

- This model comes in 2 colors (black and champagne gold).
Refer to this service manual for details.


LUXMAN DIGITAL SYNTHESIZED AM/FM STEREO RECEIVER R-341
stand-by
POWER
INPUT SELECT
tuner
CD
aux 1
phono/aux 2
tape monitor
station presets
1
2
3
4
5
6
7
8
9
10
+10
<< TUNING >>
FM
AM
CD
AUX-1
PHONO /AUX-2
CD synchro
tape monitor
VOLUME CONTROL
REC OUT SELECTOR
off
CD
source
bass
treble
balance
left
right
loudness
remote sensor
phones
speakers
A
B
store
(computer store)
stereo
mono
auto seek
manual

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Spare Schematic Diagram Inserted.

Specifications

<AMPLIFIER SECTION>

Power Output (8ohm Load, 20Hz~20kHz)	35W
Distortion (8ohm Load, 20Hz~20kHz)	0.08%
Input Sensitivity (at 1kHz)	150 ± 30mV
Input Impedance (at 1kHz)	35kohm
Frequency Response (-3dB, Ref. 1kHz)	10Hz~50kHz (○, △) 10Hz~70kHz (●, ▲)
S / N Ratio (at 1kHz, 500mV Input)	82dB (○, △) 86dB (●, ▲)
Tone Controls	Bass (100Hz) : ± 10 ± 2dB Treble (10KHz) : ± 10 ± 2dB
Residual Noise	2mV
Cross talk (at 1kHz)	60dB
Separation (at 1kHz)	56dB (○, △) 60dB (●, ▲)

<PHONO SECTION>

Input Sensitivity (at 1kHz)	2.5 ± 0.5mV
Input Impedance (at 1kHz)	47kohm
Frequency Response (± 1.5dB)	100Hz~10kHz (○, △) 20Hz~20kHz (●, ▲)
S / N Ratio (5mV Input)	74dB (○, △) 76dB (●, ▲)
Cross Talk (8ohm Load, at 1kHz)	60dB
Separation (8ohm Load, at 1kHz)	55dB

<FM SECTION>

Intermediate Frequency	10.7MHz
Frequency Range	87.5~108MHz
Usable Sensitivity	25.2dBf (○, △) 16.3dBf (●,▲)
50dB Quieting Sensitivity (Stereo)	52.2dBf (○, △) 43.3dBf (●, ▲)
S / N Ratio (Stereo)	66dB (○, △) 67dB (●, ▲)
Distortion (Stereo)	0.5%
Frequency Response	30Hz~15kHz: ± 2.5dB
Image Rejection	32dB
IF Rejection	65dB
Stereo Separation (Stereo, at 1kHz)	37dB

<MW (○, △) AM (●, ▲) SECTION>

Intermediate Frequency	450kHz
Frequency Range	522~1,611kHz (○, △) 520~1,710kHz (●, ▲)
Usable Sensitivity (20dB S/N)	62dB (○, △) 59dB (●, ▲)
S/N Ratio	45dB
Distortion	1.5% (○, △) 1% (●, ▲)
Image Rejection	28dB (○, △) 30dB (●, ▲)
Frequency Response	100Hz~2kHz:-3±3dB
IF Rejection	40dB

<LW SECTION> (○, △)

Intermediate Frequency	450kHz
Frequency Range	153~281kHz
Usable Sensitivity (20dB S/N)	78dB
Distortion	1.5%
Image Rejection	28dB
IF Rejection	25dB

<GENERAL>

Power Supply	AC 120/220/240V, 50Hz (○, △) AC 120V, 60Hz (●, ▲)
Semiconductors	19 IC's, 58 Transistors, 59 Diodes, 3 Zener Diodes, 1 FET (○, △) 23 IC's, 63 Transistors, 56 Diodes, 3 Zener Diodes, 1FET (●, ▲)
Dimensions (W×H×D)	438×115×330mm
Weight	8kg

Notes : ○: For With Safety Regulations Version (Black Type) [AD],
△: For With Safety Regulations Version (Champagne Gold Type) [AD],
●: For U.S.A. Version [UZ], ▲: For Canada Version [UQ], Others : Common.

Connection Guidelines

Before Making Connections

It is always wise to ensure that all AC power cords of the various components that you are interconnecting are unplugged from the wall outlets during the hook-up process. This will prevent any inadvertent damage to your speakers or receiver from incorrect control settings or connections.

Interconnecting Leads

Be sure that left and right channel identification is correct when making interconnections. Most patch cords are colour coded with RED ends for the right channel and BLACK or WHITE ends for the left channel, to make this job easier.

In addition, all jacks on the rear of the R-341 have red centres for right channel and white for left channel. When making connections, follow the Reference Illustrations referring also to the descriptions for items #41 through #55 on pages 11 and 12.

Speaker Connections

The following items should be observed carefully when connecting your speakers.

1. Be sure PHASING is correct by connecting the RED (+) and the BLACK (–) terminals of the R-341 to the RED (+) and BLACK (–) terminals of your speakers on each channel. Failure to do so will result in drastically reduced bass response and unstable, irregular stereo imaging.

2. To prevent the possibility of shorts, strip back the ends of the speaker leads about 1/2 inch and carefully twist the strands together. Loosen the speaker terminal knob by rotating it counterclockwise. Insert the twisted end and turn the knob clockwise to tighten.

   Inspect carefully to ensure that no frayed strands exist that may cause shorts.

3. It is recommended that 16 AWG gauge wire, or larger, be used to prevent losses. You may wish to consider some of the commercially available speaker cables that are specifically designed to improve the receiver to speaker interface.

Note on the Signal Processor Jacks

- Keep the jumper bars inserted when the "SIGNAL PROCESSOR" jacks are not in use. If the jumper bars are removed, there will be no sound output.

- Remove the jumper bars only when connecting a graphic equalizer or surround amplifier to the "SIGNAL PROCESSOR" jacks.

AC Power Cord

Insert the AC plug of the R-341 into appropriate wall outlet.

AC Outlet Connection

The outlet (item #45) may be used for power connection of most of the equipment used with your R-341.

In general connect your CD player or Graphic Equalizer to the SWITCHED outlet.

CAUTION: When connecting equipment to the outlet, be sure not to exceed the maximum power rating of 200 Watts for the SWITCHED outlet.

BUS LINE jack (Refer to illustration on page 5)

- To control "SYSTEM BUS" equipped models (such as a Luxman D-351 CD player and a K-351 tape deck) connect them to this jack.

- When interconnecting source units, the mini phone cables may be inserted into either jack (the control signals are bidirectional, therefore no "IN OUT" protocol is required).

- Plug the AC power cords of each unit included in the "BUS" system into wall AC outlets.

- "SYSTEM BUS," indentified by the symbol SYSTEM BUS printed on the carton and owner's manual of the unit, indicates the Luxman models that work with "BUS LINE" jacks on the rear panel.

AM Antenna

An AM loop antenna comes packed with your R-341. Carefully unwrap and mount it to the rear panel and connect leads.

FM "T" Type Antenna

Included also with your R-341, is an FM "T" type antenna. This type of antenna is simple and practical and will give adequate results in primary signal areas. To use it, unfold it and connect its centre leads to the DIN type connector on the rear of the receiver, using the 300 ohm to 75 ohm adapter. The antenna is designed to operate in a horizontal position, and may be attached to a nearby wall.

The R-341 is also capable of accommodating other types of cable, including 75-ohm coaxial cable (with DIN type connector). These types of cable are for use with outdoor antennas, which will be discussed next.

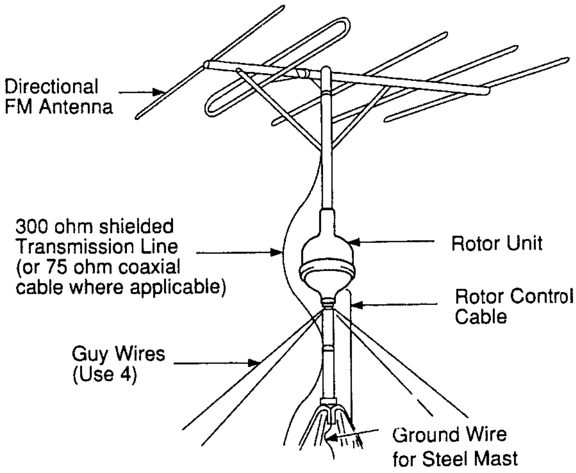
Outdoor FM Antenna

As stated before, the supplied folded FM "T" type antenna will give satisfactory results in primary signal areas. However, if you are located in a fringe area where signals are weak, then an outdoor antenna will be necessary. Even if you live in a strong signal location, an outdoor directional antenna may be needed to eliminate "multipath" reflections.

Multipath reflections are responsible for much of the distortion and noise associated with poor FM reception. They occur when radio waves from the transmitter bounce off of nearby mountains and tall buildings. The reflected waves follow different, more roundabout paths to your tuner and arrive slightly delayed and out of phase with the direct signal (hence, the term "multipath"). This causes distortion in the same manner that "ghost" images are generated on television.

The way to minimize multipath is to use a "beam type" antenna that can be aimed toward the FM transmitter and away from the multipath reflections. The best types of antennas to use are either a "Yagi" or "Log-Periodic" configuration with six or more elements designed expressly for FM reception.

If you want to receive stations from more than one general direction, then you will need a good quality antenna rotor system. This will enable you to point the antenna in the direction giving the least multipath interference, by means of a control box located near the receiver.


Directional FM Antenna
300 ohm shielded Transmission Line (or 75 ohm coaxial cable where applicable)
Rotor Unit
Rotor Control Cable
Guy Wires (Use 4)
Ground Wire for Steel Mast

Another important factor is the type of lead-in wire to use. Unshielded lead-in wires, such as 300-ohm twin lead, can act as an omnidirectional antenna, and can cancel the directional benefit of your antenna. Therefore, we recommend using a coaxial 75-ohm cable at the antenna. This shielded cable effectively prevents the lead-in from contributing to multipath distortion.

If you decide to use 75-ohm coaxial cable, we recommend buying cable with DIN type connectors attached. These will fit the FM (75 ohm) terminal on the R-341.

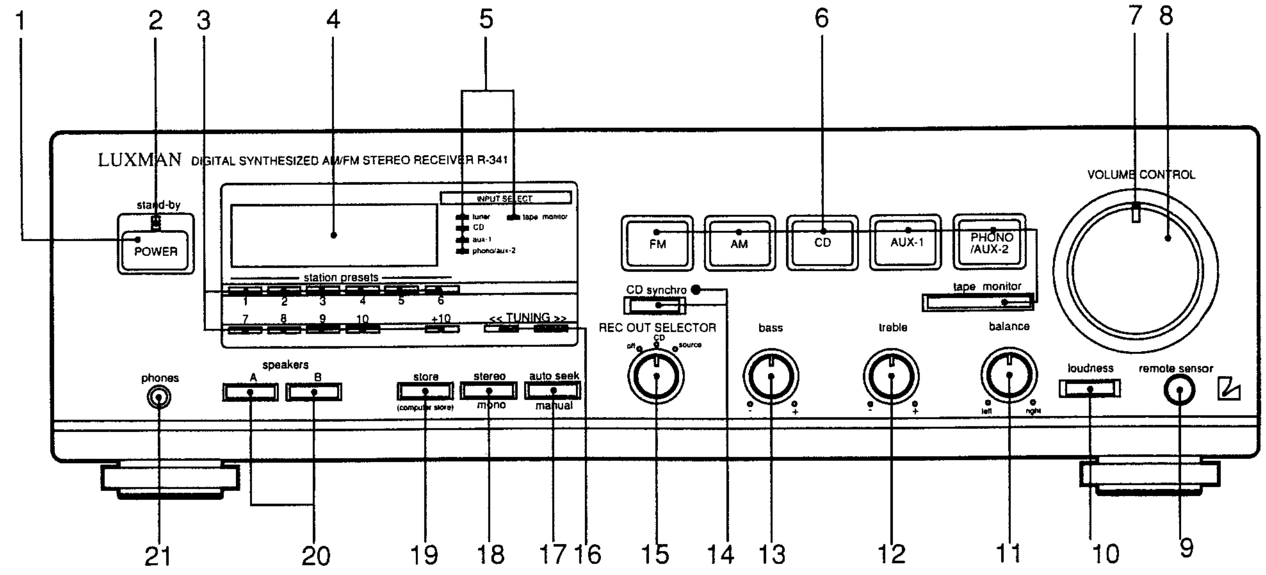
It is considered good practice to connect the antenna mast to an earth ground, both for reasons of safety and noise reduction.

For rural areas, it is recommended to consult a local dealer about installation and lightning arrester protection.

We don't recommend using master antenna systems, such as those found in flat buildings. Such systems are usually designed expressly for television reception and frequently suppress or reduce the quality of the FM signals before distribution.

Controls and Switches

Front Panel


1
2
3
4
5
6
7
8
LUXMAN DIGITAL SYNTHESIZED AM/FM STEREO RECEIVER R-341
stand-by
POWER
INPUT SELECT
tuner
tape monitor
CD
aux-1
phono/aux-2
station presets
1 2 3 4 5 6
7 8 9 10 +10
<< TUNING >>
FM
AM
CD
AUX-1
PHONO /AUX-2
VOLUME CONTROL
CD synchro
REC OUT SELECTOR
off
source
tape monitor
bass
treble
balance
left
right
loudness
remote sensor
phones
speakers
A
B
store
(computer store)
stereo
mono
auto seek
manual
21
20
19
18
17
16
15
14
13
12
11
10
9

1. **"POWER" button**

   Pressing this button turns the unit on and off, along with other equipment that may be plugged into the rear panel switched AC outlet.

2. **"stand-by" indicator**

   Lights up when the power button is turned off to show that the remote system is ready to receive a power ON command.

3. **"station presets" buttons**

   A total of 20 AM (LW/MW) and/or FM stations may be placed into memory in any random order and recalled for instant play, with these buttons. Select previously stored preset stations by pressing the desired number 1 through 10. For presets 11 through 20, press the +10 button first, then 1 through 10. Each number thus selected will appear in the display just under the words "STATION PRESET."

4. **Display**

   This display window shows the frequency of tuned AM (LM/MW) and FM stations. In addition, the station preset number, currently selected from memory, is displayed to the right of the station frequency.

5. **"INPUT SELECT" indicators**

   The LED indicator for the selected input source will light up to tell which source is selected with the Input Select buttons (item #6).

6. **Input Select buttons**

   Press one of these buttons to select any one of six sources; AM, FM, CD, AUX-1, PHONO/AUX-2 and tape.

7. **Volume Indicator**

   The red LED on the knob will blink when the "VOLUME" buttons (item #38) and "MUTE" button (item #37) on the remote control are operated.

8. **"VOLUME CONTROL"**

   Allows precision, low noise adjustment of volume level, both manually and by remote control. It is recommended that the volume control be set to a low position prior to power turn on and when switching between sources.

9. "remote sensor"

When using the hand held remote control, it must be pointed toward this sensor to activate operational functions.

10. "loudness" button

Depressing this button introduces a moderate boost of the very low and high frequencies when the volume control is set below the half-way position. This compensates for the human ear's characteristic at low listening levels.

11. "balance" control

Adjusts for unequal volume level between channels. Normally, with today's high quality sources, it is seldom necessary to move this control from its precision centre detent position.

12. "treble" control

This control will increase or decrease high frequency content in the program material. At the centre detent position, a flat frequency response results.

13. "bass" control

This control will increase or decrease low frequency content in the program material. At the centre detent position, a flat frequency response results.

14. "CD synchro" button and indicator

CD play and tape recording can be started simultaneously by simply pressing the "CD synchro" button. In addition the LED indicator will light.

Notes:

- CD Synchro only works with a BUS connected system.
- The "REC OUT SELECTOR" switch (item #15) must be in the "CD" position.

---

15. "REC OUT SELECTOR"

For selecting a recording source. When not in use, set it to the "off" position.
When in the CD position, you may listen to any other source while recording from CD. Also, this switch must be in the CD position for CD Synchro recording.

16. "TUNING" buttons (<<, >>)

Allow manual up/down tuning and initiate auto tuning in the "auto seek" mode (see item #17).

17. "auto seek and manual" button

When depressed, this button activates the auto seek automatic tuning mode, in conjunction with the "TUNING" buttons (item #16), for AM (LW/MW) and FM operation.
In addition the "AUTO SEEK" indicator (item #22) will light.

18. "stereo and mono" button

This button selects either STEREO or MONO mode for FM listening. It works with the "STEREO/MONO" indicators (item #23).

19. "store (computer store)" button

Depressing this button will allow any tuned AM (LW/MW) or FM station to be stored in any one of the 20 AM/FM RANDOM STATION PRESET locations (see also item #3). If you wish to store a station that you have tuned, momentarily press this button. When the "STORE" indicator (item #26) comes on, press the preset button into which you wish to store it.

For automatic "computer store" of a series of FM or AM (LW/MW) stations, press this button for more than 1 second. When the "COMPUTER STORE" indicators (items #25 and 26) come on, press the preset number at which you want the storing operation to start. Stations will be sequentially stored in an upward direction into the presets beginning with the first AM or FM station tuned. For more details, refer to page 16.

20. "speakers A and B" buttons

Two sets of stereo speaker systems may be used with the R-341; A and B buttons corresponding with "SPEAKERS A and B" terminals (item #43) on the rear panel. You may choose independent or simultaneous operation of the two systems by using these buttons.

Note:
The impedance of each speaker system should equal or exceed 8 ohms when driving two sets at the same time.

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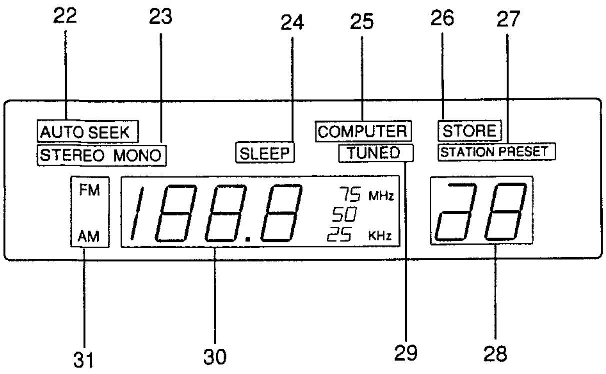
21. "phones" jack

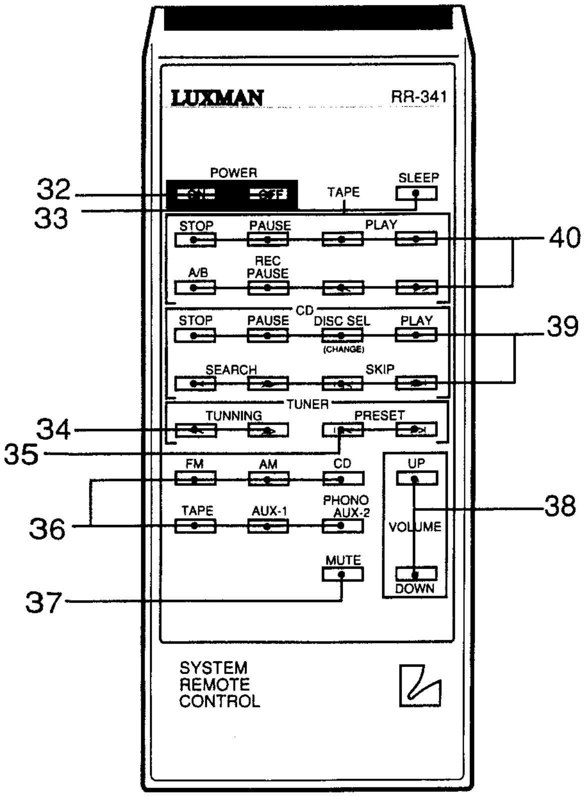
Connection of stereophonic headphones to this jack allows private listening. There is signal at the jack at all times. Placing the "speakers A and B" buttons (item #20) in the OUT position will allow private listening.

Display


22
23
24
25
26
27
AUTO SEEK
STEREO MONO
SLEEP
COMPUTER
TUNED
STORE
STATION PRESET
FM
AM
188.8
75 MHz
50
25 KHz
d8
31
30
29
28

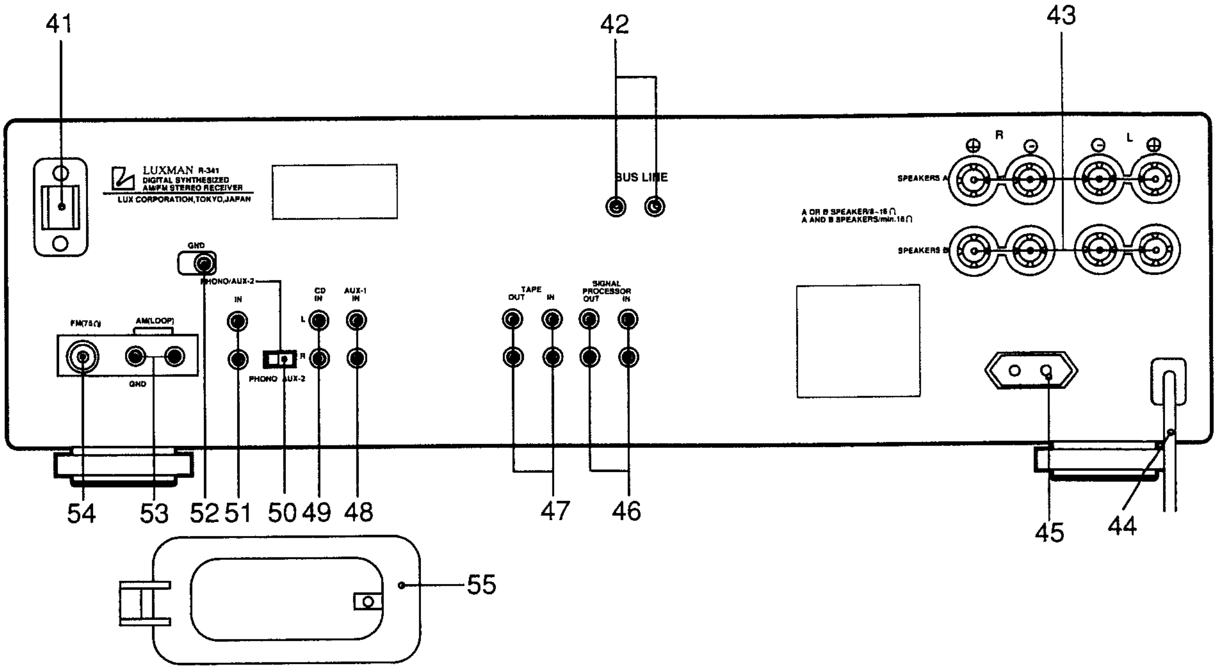
22. "AUTO SEEK" indicator
23. "STEREO MONO" indicator
24. "SLEEP" indicator (See page 18)
25. "COMPUTER" indicator
26. "STORE" indicator
27. "STATION PRESET" indicator
28. Preset No. indicator
29. "TUNED" indicator
30. FM, AM (LW/MW) Frequency display
31. FM, AM Band indicator

Remote Control unit


LUXMAN
RR-341
POWER
ON
OFF
TAPE
SLEEP
STOP
PAUSE
PLAY
A/B
REC PAUSE
CD
STOP
PAUSE
DISC SEL
(CHANGE)
PLAY
SEARCH
SKIP
TUNER
TUNNING
PRESET
FM
AM
CD
UP
TAPE
AUX-1
PHONO AUX-2
VOLUME
MUTE
DOWN
SYSTEM REMOTE CONTROL
32
33
34
35
36
37
38
39
40

32. "POWER ON/OFF" buttons
33. "SLEEP" button (See page 18)
34. "TUNING" buttons (<<, >>)
35. "PRESET" buttons (|<<, >>|)
36. Input Selector buttons
37. "MUTE" button (See page 17)
38. "VOLUME UP/DOWN" buttons
39. CD Player Control buttons
40. Cassette Deck Control buttons

Rear Panel


41
42
43
LUXMAN R-341
DIGITAL SYNTHESIZED
AM/FM STEREO RECEIVER
LUX CORPORATION,TOKYO,JAPAN
BUS LINE
R
L
⊕
⊖
⊖
⊕
SPEAKERS A
SPEAKERS B
A OR B SPEAKER/8~16 Ω
A AND B SPEAKERS/min.16 Ω
GND
PHONO/AUX-2
IN
CD
IN
AUX-1
IN
L
R
PHONO
AUX-2
TAPE
OUT
IN
SIGNAL
PROCESSOR
OUT
IN
FM(75Ω)
AM(LOOP)
GND
54
53
52
51
50
49
48
47
46
45
44
55

41. Holder AM Antenna

This holder is designed for easy mounting or removal of the AM LOOP ANTENNA. Align mating surfaces carefully and install with a firm push.

42. "REMOTE CONTROL BUS LINE" jacks

Use these jacks only with Luxman CD players and Tape Decks that are also equipped with BUS line jacks, such as the D-351 and the K-351.

When interconnecting these units with the R-341, the mini phone cables may be inserted into either of their two BUS jacks (the control signals are bidirectional, therefore no "IN OUT" protocol is required).

43. "SPEAKERS A and B" terminals

You may connect 2 pairs of stereo speaker systems to these terminals, one pair to the upper "A" terminals and a 2nd pair to the lower "B" terminals.

The speaker systems may be switched on and off by the front panel "speakers A and B" buttons (item #20).

44. AC Power Cord

Insert the AC plug of the R-341 into appropriate wall outlet.

45. AC Outlet

For convenient AC power connection of other audio component to your system, a SWITCHED outlet (200 watts max.) is available.

46. "SIGNAL PROCESSOR IN and OUT" jacks

For connection of a surround sound processor, an equalizer or other signal processor as desired.

Note:
Jumper bars are factory installed in these jacks. They need to be removed when connecting a processor. Retain for possible future reuse.

---

47. "TAPE IN and OUT" jacks

Connect the LINE IN and LINE OUT jacks of your audio tape deck to these OUT and IN jacks respectively.

48. "AUX-1 IN" jacks

Connect the audio output of a VCR, Video Disc Player, CD Player, Cassette Deck, etc. to the "AUX-1 IN" jacks of the R-341.

49. "CD IN" jacks

This set of jacks is for connection of a CD (compact disc) player. They may also be used for any other high level signal source as well.

50. "PHONO/AUX-2" switch

If a phono turntable is not required in the system, this switch allows the phono jacks to be used as an additional set of high level inputs. Move it to the "AUX-2" position for connection of an additional CD player, Tape deck, etc.

CAUTION: Be sure the volume control is set to minimum when setting this switch.

51. "PHONO/AUX-2 IN" jacks

A moving magnet (MM) type phono cartridge may be connected to these inputs. Also, they may be used as an additional set of high level inputs (see item #50).

CAUTION: When these jacks are used for high level inputs, ensure that the "PHONO/AUX-2" switch (item #50) is set to "AUX-2" to prevent possible damage to the receiver and speakers.

52. "GND" terminal

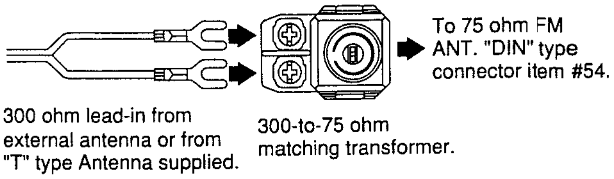
Connect the common (ground) lead of your phono turntable to this terminal.

53. "AM (LOOP)" antenna terminals

For connection of the leads of the AM Loop Antenna (item #55) supplied with the R-341.

54. "FM (75 Ω)" terminal

For connection of 75 ohm coaxial cable lead-in with "DIN" type connector, or a 300 ohm lead-in used with the 300-to-75 ohm adapter supplied. See diagram below.

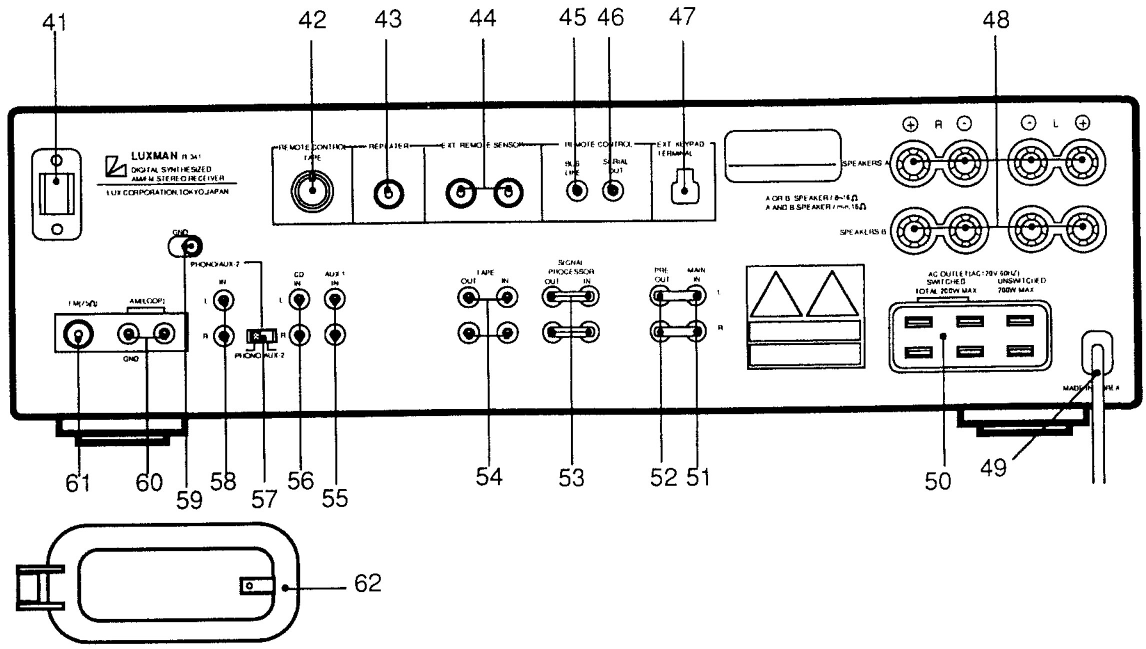

To 75 ohm FM ANT. "DIN" type connector item #54.
300 ohm lead-in from external antenna or from "T" type Antenna supplied.
300-to-75 ohm matching transformer.

55. AM Loop Antenna

This antenna can be rotated on its holder (item #41) for maximum pick-up, or removed and placed elsewhere for best reception (within the limitation of its 23" lead length).

Jacks and Terminals

Rear Panel



41. Holder-AM Antenna

This holder is designed for easy mounting or removal of the AM Loop Antenna (item #62). Align mating surfaces carefully and install with a firm push.

42. "REMOTE CONTROL TAPE" DIN jack

For unified system remote control using Luxman cassette decks, all controlled from the one hand held remote supplied with the R-341.

To remote control a "DIN" equipped tape deck (such as a Luxman K-110, K-110W, etc.) connect it to this jack, and the audio leads to the TAPE IN and OUT jacks.

43. "REPEATER" jack

For connection of Luxman's remote control command repeater, RC-503.

44. "EXT. REMOTE SENSOR" jacks

These "F" type coaxial connectors are for connection of Luxman's RC-501 remote room sensor "eyes." This permits remote control of a complete R-341 system from other rooms.

45. "REMOTE CONTROL BUS LINE" jack

Use this jack only with Luxman CD players and Tape Decks that are also equipped with BUS line jacks, such as the D-351 and the K-351.
When interconnecting these units with the R-341, the mini phone cables may be inserted into either of their two BUS jacks (the control signals are bidirectional, therefore no "IN OUT" protocol is required).

46. "REMOTE CONTROL SERIAL OUT" jack

For connection of Luxman's serial "Daisy Chain" unified remote control system, using Luxman models DZ-111, DZ-112, DZ-121, DZ-122, DC-113, DC-114 and future new models using the serial jacks system.

Note:
Do not connect to both the "SERIAL REMOTE" and "BUS LINE" jacks simultaneously; connect to either the "SERIAL REMOTE" or "BUS LINE" jacks, according to the CD player model in use.

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47. **"EXT. KEYPAD TERMINAL"**
For keypad operation in a remote room, connect this jack via a standard RJ-11 modular phone jack and 4 lead wire to the Luxman model RC-505 Keypad in-wall controller.

CAUTION: Do not connect the telephone line to this terminal.

48. **"SPEAKERS A and B" terminals**
You may connect 2 pairs of stereo speaker systems to these terminals, one pair to the upper "A" terminals and a 2nd pair to the lower "B" terminals.
The speaker systems may be switched on and off by the front panel "speakers A and B" buttons (item #20).

49. **AC Power Cord**
Insert the polarized plug of the R-341 into any 120 Volt AC, 60 Hz wall outlet. The wider contact side of the plug is the ground side.

Note:
See Reference Illustrations, page 5 for typical connections to all jacks and terminals (item 41 through 62).

50. **AC Outlets**
For convenient AC power connection of other audio and video components in your system, 2 SWITCHED outlets (total 200 watts max.) and 1 UNSWITCHED outlet (200 watts max.) are available. The wider opening of each outlet indicates the ground side of the polarized AC line.

51. **"MAIN IN" jacks**
Using both the "PRE OUT" (item #52) and "MAIN-IN" jacks, connect them to the correct inputs and outputs of satellite sub-woofer systems or other audio gear as desired.

Note:
Remove the jumper bars when using these and the "PRE OUT" jacks. Retain for future use.

52. **"PRE OUT" jacks**
Connect to the input jacks of external power amplifiers for multi-speaker or multi-room applications. The output level is controlled by the "VOLUME CONTROL" (item #8) and by the remote control "VOLUME UP/DOWN" buttons (item #38). The output level is 1 volt, referenced to 150 mV at the high level inputs, with the volume control at maximum.

53. **"SIGNAL PROCESSOR IN and OUT" jacks**
For connection of a surround sound processor, an equalizer or other signal processor as desired.

Note:
Jumper bars are factory installed in these jacks. They need to be removed when connecting a processor. Retain for possible future reuse.

54. **"TAPE IN and OUT" jacks**
Connect the LINE IN and LINE OUT jacks of your audio tape deck to these OUT and IN jacks respectively.

55. **"AUX-1 IN" jacks**
Connect the audio output of a VCR, Video Disc Player, CD Player, Cassette Deck, etc. to the "AUX-1 IN" jacks of the R-341.

56. **"CD IN" jacks**
This set of jacks is for connection of a CD (compact disc) player. They may also be used for any other high level signal source as well.

57. **"PHONO/AUX-2" switch**
If a phono turntable is not required in the system, this switch allows the phono jacks to be used as an additional set of high level inputs. Move it to the "AUX-2" position for connection of an additional CD player, Tape deck, etc.

CAUTION: Be sure the volume control is set to minimum when setting this switch.

58. "PHONO/AUX-2 IN" jacks

A moving magnet (MM) type phono cartridge may be connected to these inputs. Also, they may be used as an additional set of high level inputs (see item #57).

CAUTION: When these jacks are used for high level inputs, ensure that the "PHONO/AUX-2" switch (item #57) is set to "AUX-2" to prevent possible damage to the receiver and speakers.

59. "GND" terminal

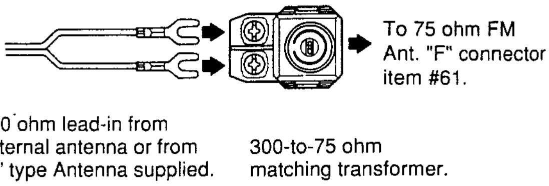
Connect the common (ground) lead of your phono turntable to this terminal.

60. "AM (LOOP)" antenna terminals

For connection of the leads of the AM Loop Antenna (item #62) supplied with the R-341.

61. "FM (75 Ω)" terminal

For connection of 75 ohm coaxial cable lead-in with "F" connector, or a 300 ohm lead-in used with the 300-to-75 ohm adapter supplied. See diagram below.


To 75 ohm FM Ant. "F" connector item #61.
300 ohm lead-in from external antenna or from "T" type Antenna supplied.
300-to-75 ohm matching transformer.

62. AM Loop Antenna

This antenna can be rotated on its holder (item #41) for maximum pick-up, or removed and placed elsewhere for best reception (within the limitation of its 23" lead length).

Operation Guidelines

The following guidelines assume that all connections have been made according to the "Reference Illustrations".

Power and Source Switching

To prevent the possibility of excessive, sudden sound levels, it is recommended that the volume control be placed at a low level position each time the power button is turned on or when switching between sources by the INPUT SELECTOR.

Tape Recording Operations

To make a tape recording of any source, proceed as follows:

1. Press the Input Select button (item #6) for the source you wish to record.
2. Rotate the "REC OUT SELECTOR" (item #15) to the "source" position.
3. The source signal will now be fed to the tape deck. Follow the recording instructions for the tape deck in use.
4. If you have a 3 head deck, you can monitor the actual recording by depressing the "tape monitor" button (item #6) on the R-341.
5. When recording from a CD player, use the CD position. This allows you to listen to any other source while recording a CD.

Tape Playback

1. Press the "tape monitor" button (item #6).
2. Operate the tape deck.

FM/AM Tuner Operations

The R-341 incorporates several tuning methods to provide ease, yet great flexibility in station selection and use. Proceed as follows:

Auto Tuning

1. Press the "AM/FM" select button (item #6) to indicate the desired band, "FM or AM (LW/MW)" in the display.
2. Press the "auto seek" button (item #17) to indicate "AUTO SEEK" in the display.
3. Press the "TUNING" buttons (item #16) to select the desired broadcast station.

- When a station is tuned in, "TUNED" is indicated.
- When a stereo program is tuned in, "TUNED" and "STEREO" are indicated.
- To tune in a station with weak signals, press the "auto" button to turn off the "AUTO SEEK" indicator. Then press "TUNING" buttons (item #16).

Notes:
- Be sure to press the "stereo and mono" button (item # 18) to receive a stereo program.
- If noise is heard while listening to FM or AM (LW/MW) broadcasts, it may be necessary to turn off the CD player, video disc player or TV.

Station Preset Operation

A total of 20 AM/FM stations can be stored in any order in preset numbers 1 to 20.

Auto "computer store"

If you wish to have the internal computer of the R-341 store a series of stations for you, proceed as follows:

1. Select AM (LW/MW) or FM as desired.
2. Press the "TUNING" buttons (item #16) to the frequency of the station from which you wish to have the computer store operation begin.
3. Press the "store (computer store)" button (item #19) for more than 1 second. "COMPUTER STORE" will appear in the display.
4. Press "station presets" button (item #3) within 7 seconds.

The tuner will now scan upward and store stations until the 20th preset location is filled. At this point the operation stops, or it will stop previous to this if there are insufficient stations in your reception area to fill all locations.

You may also start the computer store operation at any station preset location, such as #6 or #14. Just press such locations immediately after pressing the computer store button. Remember, auto store will not go beyond the 20th location; it will not wrap around to the #1 position.

Manual "Store"

1. Tune in a desired station as described in "Auto Tuning."
2. Press the "store" button (item #19) for less than 1 second. The "STORE" indicator will show for 7 seconds in the display.
3. Select and press a desired preset number between 1 and 20 (item #3).

Station Recall

Press the preset number of the desired station with the "station presets" buttons (item #3).

Note:
When a previously stored "station presets" button (item #3) is pressed, the input selector switch will automatically go to the "TUNER" position.

If the displayed station preset number is chosen by a "station presets" button, the input selector switch will remain on the current source.

To Turn Power ON or OFF

Press "POWER" buttons (item #32).

Operating the R-341 Receiver

- To select a desired source, press a source button (item #36), FM, AM, CD, TAPE-1, AUX-1, PHONO/AUX-2.
- To turn up the volume, press "VOLUME UP" button (item #38).
- To turn down the volume, press "VOLUME DOWN" button (item #38).
- To mute the sound temporarily, press "MUTE" button (item #37).
- To restore the sound, press it again.
(During muting, the volume indicator blinks.)

Tuning in a station

1.) Press Input Selector buttons (item #36) to select FM or AM (LW/MW).
2.) Press "TUNING" buttons (item #34) to tune in a station.

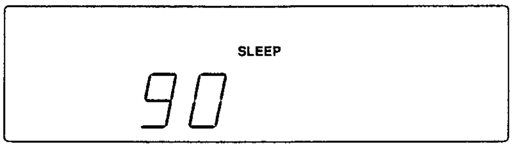
Recalling a preset station

Press "PRESET" buttons (item #35) to call up the preset stations in any order.

Setting the Sleep Timer

The sleep timer will turn the system off after a preset time has passed. The timer can be set for up to 90 minutes in 10 minute decrements.

1.) Press the "SLEEP" button (item #33) while receiving a station or while playing any source.



The system will turn off after about 90 minutes.

2.) Press the "SLEEP" button repeatedly until the desired time is displayed.
Each time the "SLEEP" button is pressed, the time indication changes as follows:

→90 → 80 → 70 → 60 ··→ 10 → no indication

During sleep timer operation, the display shows the remaining time in 1 minute decrements. The power will be turned off when 0 is reached.

- To cancel the sleep timer, press the "SLEEP" button repeatedly until the "SLEEP" indicator goes off.

- To change the sleep time, press the "SLEEP" button repeatedly until the desired time is displayed.

Bus System Operations

Products connected to the "BUS LINE" jack allow following operations from the RR-341 remote control unit.

Automatic Source Switching and Play of Music Sources

When a source button on the RR-341 is pressed, the corresponding source unit will automatically be placed in PLAY mode and be heard. Similarly, when a play button is pressed on a source unit or the tuning or station preset buttons pressed on the receiver, the input source selector on the R-341 will automatically be switched to the corresponding source. This feature works only with Luxman CD players and Tape Decks that are equipped with BUS line jacks.

Operating the Cassette Deck

The following operations are possible

To start playback	>
To start reverse playback	<
To fast forward to the right/rewind to the right	>>
To fast-forward to the left/rewind to the left	<<
To music search to the right	>>
To search to the left • Each time a >> or << button is pressed, a track is added. (Up to 8 tracks in both directions.)	> or < ⇩ <<
To select deck A or B	A/B
To stop playback or recording	STOP
To set the cassette deck to recording pause mode	REC PAUSE
To record • Press the < or > button, use direction that is the same as that indicated by the tape direction indicator on the tape deck.	REC PAUSE ⇩ < or >

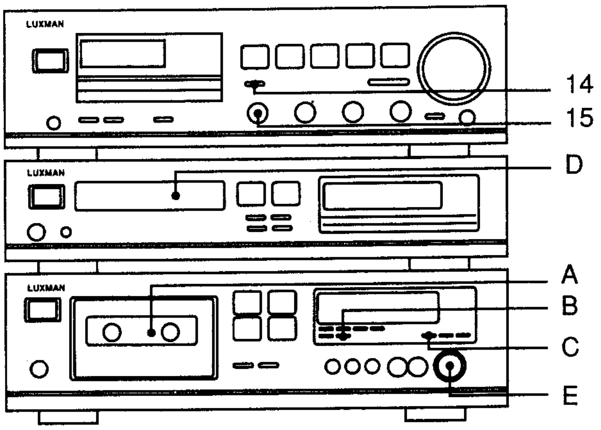
Operating a CD Player

The following operations are possible.

To start play	PLAY
To stop play	STOP
To stop play temporarily	PAUSE
To skip tracks in forward direction	>>|
To skip tracks in backward direction	|<<
To search a track in forward direction	>>
To search a track in backward direction	<<
To select a disc in a CD changer	DISC SEL ⇩ |<< >>|

"CD Synchro" Recording

When the R-341 is used with BUS line equipped source units, such as the Luxman D-351 CD player and K-351 cassette tape deck, synchronized start/record, pause and stop functions are possible when making recordings of CDs with the press of a single button. For instance, when the "CD synchro" button (item #14) on the R-341 is pressed, the K-351 cassette deck will go into record mode and the D-351 begins playing at the same time.



Use the following procedure:

1. Set the "REC OUT SELECTOR" (item #15) to "CD."
2. Insert a tape for recording into the deck (item #A in a previous diagram).
3. Set the REVERSE MODE selector switch (item #B), in the single reverse position, if the tape deck is so equipped.
4. Select the Dolby NR mode with the "DOLBY NR" switch (item #C).

	DOLBY NR ON/OFF button	B/C button
To record in Dolby B NR mode	▬ ON (depressed)	■ B (released)
To record in Dolby C NR mode	▬ ON (depressed)	▬ C (depressed)
To record without Dolby NR mode	■ OFF (released)	Any position

5. Place the disc in the CD player (item #D). Recordings can be made to fit the length of the tape used, if your CD player has an editing function. For further details, refer to the manual of the CD player.
6. Turn "REC LEVEL" control (item #E) to rec and adjust the recording level.
7. Press "CD synchro" button (item #14) of the R-341. CD play and tape recording will start simultaneously. The recording level is indicated by the level indicator. When +3 lights up on music peaks, the level is set appropriately.
8. To stop synchronized recording, press the STOP button on the cassette deck or CD player.

Notes:

- To record on both sides start with the frontside. Recording cannot be continued from the reverse side to the front side. Therefore, when the recording on the reverse side is completed, it stops.

- Recording will not start if the playback button for the opposite direction is pressed.

- Be sure to advance past the leader tape before recording. Otherwise, the beginning of the CD may not be recorded.

- Location of the switches will be different depending upon the models connected, so perform operations by referring to the Owner's Manual for each model.

Remote Operations

For reliable operation, use the hand-held remote control within the basic dimensional area.

Battery Replacement

1. Open the battery compartment cover on the rear of the remote control unit. The cover should open easily if you press on it with your thumb and slide it in the direction of the arrow.

2. Place two "AAA" size dry batteries in the battery compartment in accordance with the diagram in the compartment, then replace the cover.

Incorrect use of batteries may lead to leakage or rupture. Be sure to follow these guidelines:

A. Always insert batteries into the battery compartment correctly matching the positive (+) and negative (–) polarities as shown in the diagram inside the compartment.

B. Never mix new and used batteries together.

C. Both rechargeable and non-rechargeable batteries are available. Be sure to use your batteries in accordance with the instructions provided on the cells.

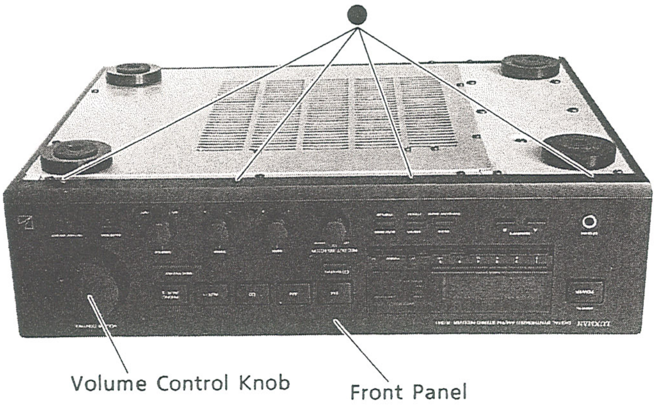
Disassembly Instruction

1.Removal of Front Panel

(1) After removal of Top Cover, remove one connector (CH16) as shown in Figure 2.

(2) Remove the Volume Control Knob as shown in Figure 1.

(3) Remove four screws marked "●" and three Hooks (A) as shown in Figures 1 and 2.

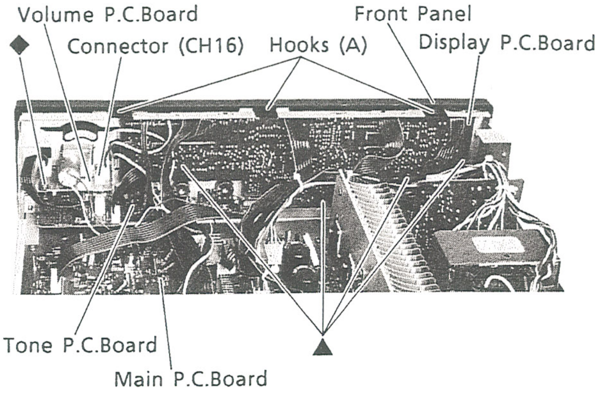

●
Volume Control Knob
Front Panel

<Figure 1>

2. Removal of Volume P.C.Board

(1) After removal of Front Panel, remove one screw marked "◆" and Nut & Washer (C) as shown in Figures 2 and 4.

(2) Disconnect all wires from the Volume P.C.Board.

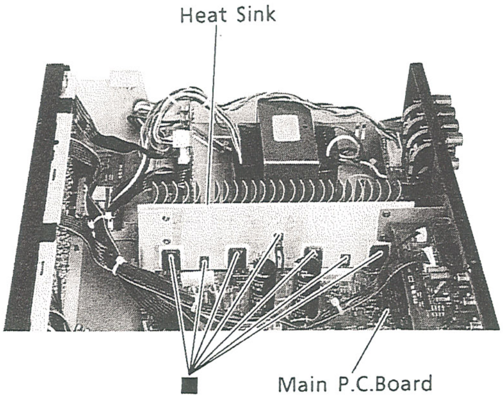

Volume P.C.Board
◆
Connector (CH16)
Hooks (A)
Front Panel
Display P.C.Board
Tone P.C.Board
Main P.C.Board
▲

<Figure 2>

3. Removal of Display P.C.Board

(1) After removal of Volume P.C.Board, remove four screws marked "▲" and Nut & Washer (A) as shown in Figures 2 and 4.

(2) Disconnect all wires from the Display P.C.Board.

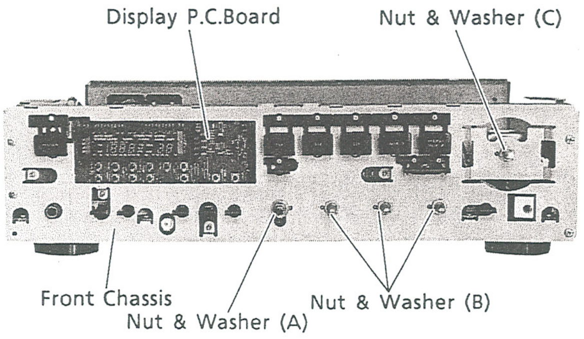

Heat Sink
■
Main P.C.Board

<Figure 3>

4. Removal of Tone P.C.Board

(1) After removal of Display P.C.Board, remove Nut & Washer (B) as shown in Figure 4.

(2) Disconnect all wires from the Tone P.C.Board.

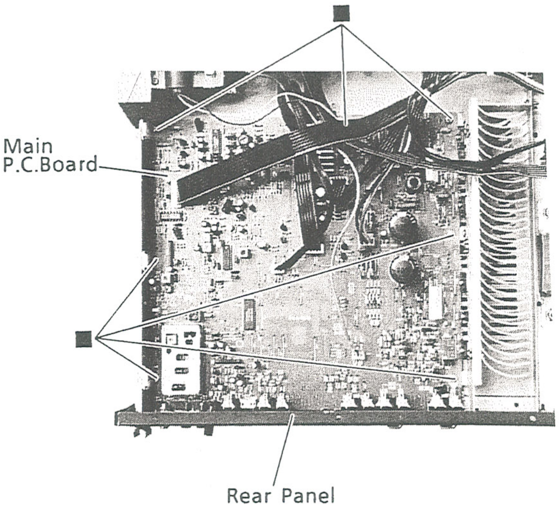

Display P.C.Board
Nut & Washer (C)
Front Chassis
Nut & Washer (A)
Nut & Washer (B)

<Figure 4>

5. Removal of Main P.C.Board

(1) After removal of Tone P.C.Board, remove fourteen screws marked "■"as shown in Figures 3 and 5.

(2) Disconnect all wires from the Main P.C.Board.


■
Main P.C.Board
■
Rear Panel

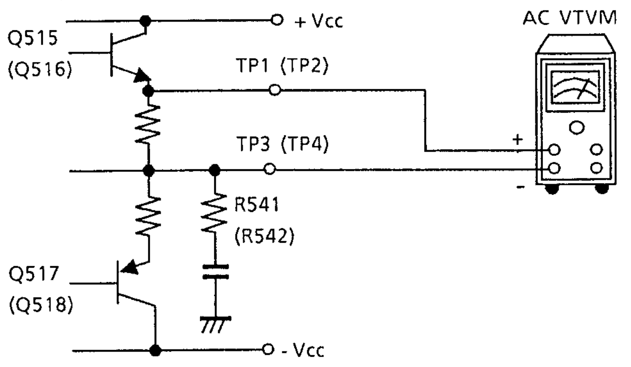
<Figure 5>

Adjustment Procedures

1. Audio Section Adjustment

(1) Idling Current Adjustment

①Connection Diagram



<Figure 6>

②Adjustment Method

a. Conduct ageing by setting the main volume control (VR301)at the minimum position.
b. Adjust VR501(VR502) to obtain 2mV output voltage.

2. FM Tuner Section Adjustment

(1) Adjustment Conditions

①Standard Antenna Input		65dBf (75ohm)
②Standard Modulation, MONO		Mod. -Frequency : 1KHz Deviation : 75KHz
	STEREO	Mod. -Frequency : 1KHz Main (L+R) : 68.25KHz Pilot : 6.75KHz
③Test Frequency		98.1MHz
④Output Terminal		Tape Rec-Out (10Kohm)

(2) DET-Coil Adjustment

①Apply the standard modulation, mono signal from SSG(65dBf) to the ANT terminal.
②Turn on the AUTO SEEK mode.
③Adjust T102 so that the total harmonic distortion level becomes minimum.

(3) Stop Level Adjustment

①Apply the standard modulation, mono signal from SSG to the ANT terminal.
②Set the antenna input level at 33dBf.
③Activate the AUTO SEEK function and adjust VR102 so that the AUTO SEEK function stop with the SSG input frequency.
④Check the AUTO SEEK function both in the up and down directions.
⑤The antenna input level to stop the AUTO SEEK function should be within the following range.

40.2 ± 6dBf

(4) Stereo Separation Adjustment

①Apply the standard modulation, stereo signal to the ANT terminal.

②Set the modulation mode of MPX signal Generator to the L or R channel, then adjust VR104 so that the signal leakage from the signal output channel to the other channel becomes minimum.

③Switch the modulation mode to the other channel and check in the same manner as above step to confirm the values for both the L and R channels are almost same.

(5) MPX Coil Adjustment

①This adjustment is required only when the 19KHz signal leakage. level is high.

②Make B.P.F (200Hz~15KHz) flat.

③Apply the standard modulation, stereo signal (65dBf) to the ANT terminal.

④Apply only, the pilot signal (19KHz)from MPX signal generator, then measure the leakage level of the pilot signal to the TAPE REC OUT terminal.

⑤If the leakage level is much different from ≦ -60dB, adjustment is required.

⑥Adjust L105 (L) and L106 (R) to minimize the leakage.

3. AM Tuner Section Adjustment (AM : ●, ▲ MW / LW : ○, △)

(1) Adjustment Conditions

①Standard Antenna Input	Refer to the followings.
②Standard Modulation	Mod. Frequeucy : 400Hz Mod. Ratio : 30%
③Adjustment Frequency	Refer to the followings.
④B.P.F	200Hz~15KHz

(2) IF Adjustment

①Apply the field strength of standard adjustment conditions to the LOOP - ANT terminal.

②Set the frequency of SSG to 1,000KHz.

③Tune to 1,000KHz and adjust T101 for the maximum output.

④Measure the selectivity and confirm that it is within ±10KHz.

⑤IF a sweep IF scope is available, look at the IF waveform and adjust to obtain symmetric waveform with the central IF frequency.

⑥Repeat the above adjustment steps until satisfactory results are obtained.

(3) Frequency Range Adjustment (AM : ●, ▲ MW : ○, △)

①Apply the field strength of standard adjustment conditions to the LOOP - ANT terminal.

②Set the frequency of SSG to 520KHz. (●, ▲)

②Set the frequency of SSG to 603KHz. (○, △)

③Connect the hot terminal of DC Voltage Meter to TP 5 and the cold terminal to GND.

④Tune to 520KHz and adjust L104 to obtain 1V. (●, ▲)

④Tune to 603KHz and adjust L104 to obtain 2±0.1V. (○, △)

⑤Set the frequency of SSG to 1,710KHz. (●, ▲)

⑤Set the frequency of SSG to 1,404KHz. (○, △)

⑥Tune to 1,710KHz and adjust VC102 to obtain 9V. (●, ▲)

⑥Tune to 1,404KHz and adjust VC102 to obtain 6.5±0.1V. (○, △)

⑦Repeat the above adjustment steps until satisfactory results are obtained.

Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

(4) Tracking Adjustment

①Apply the field strength of standard adjustment conditions to the LOOP-ANT terminal.
②Set the frequency of SSG to 600KHz. (●, ▲)
②Set the frequency of SSG to 999KHz. (○, △)
③Tune to 600KHz and adjust L102 for the maximum output. (●, ▲)
③Tune to 999KHz and adjust L102 for the maximum output. (○, △)
④Set the frequency of SSG to 1,400KHz. (●, ▲)
⑤Tune to 1,400KHz and adjust VC103 for the maximum output. (●, ▲)

(5) Stop Level Adjustment

①Apply the field strength of standard adjustment / modulation conditions to the LOOP-ANT terminal.
②Set the frequency of SSG to 1,000KHz. (●, ▲)
②Set the frequency of SSG to 999KHz. (○, △)
③While the AUTO SEEK function is being operated, adjust VR101 so that the AUTO SEEK function will stop with the input frequency of SSG.
④Check the AUTO SEEK function both in the up and down directions.
⑤The Auto Stop level should be within the following range:

60 ± 6dB / m

(6) Frequency Range Adjustment (LW : ○, △)

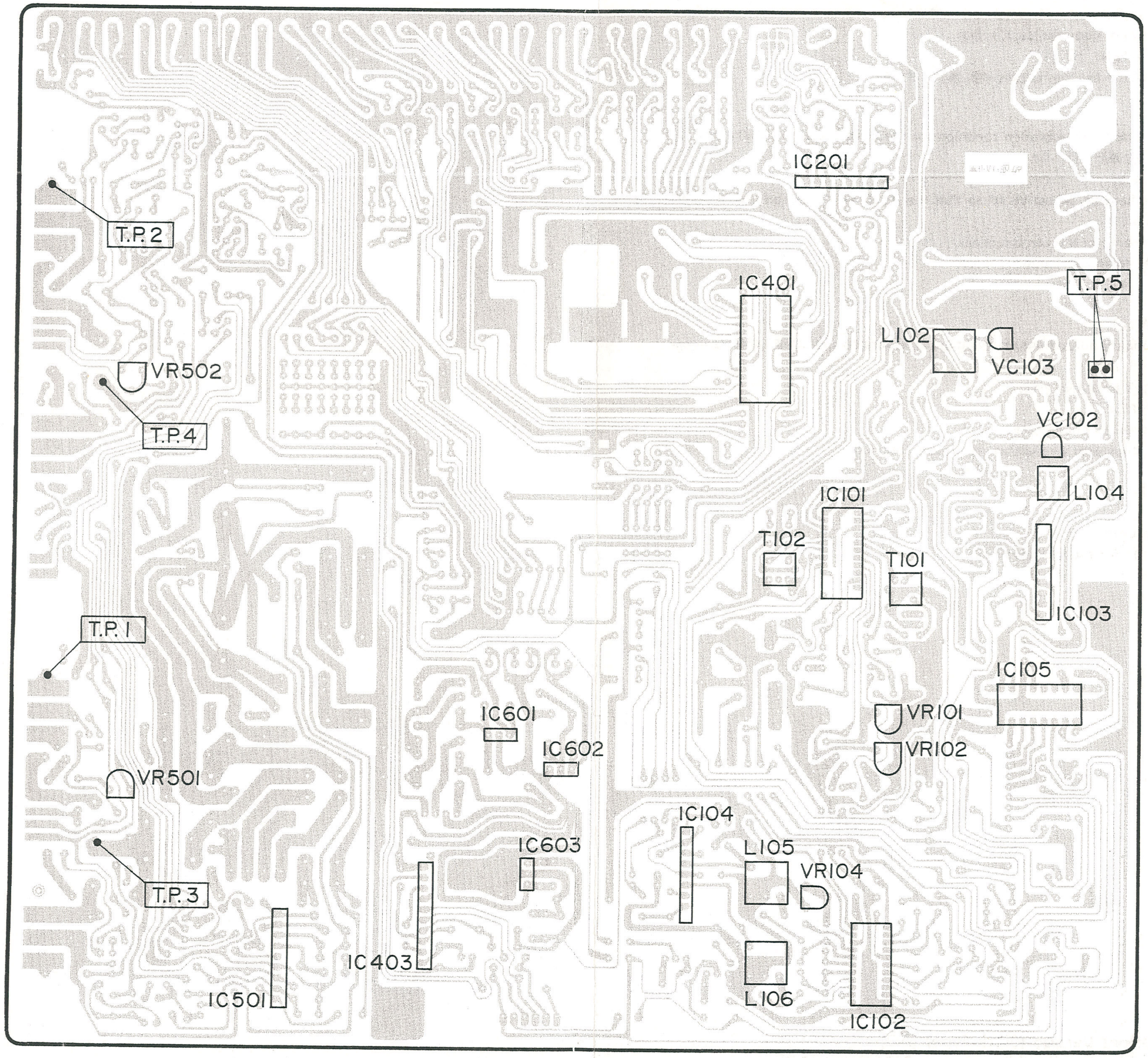
①Apply the field strength of standard adjustment / modulation conditions to the LOOP-ANT terminal.
②Set the frequency of SSG to 170KHz.
③Tune to 170KHz and adjust L103 to obtain 2.5V.
④Set the frequency of SSG to 260KHz.
⑤Tune to 260KHz and adjust VC101 to obtain 5.2V.
⑥Repeat the above adjustment steps until satisfactory results are obtained.

(7) Tracking Adjustment (LW : ○, △)

①Adjust the ANT-COIL (L101).
②Set the frequency of SSG to 210KHz.
③Tune to 210KHz and adjust L101 for the maximum output.

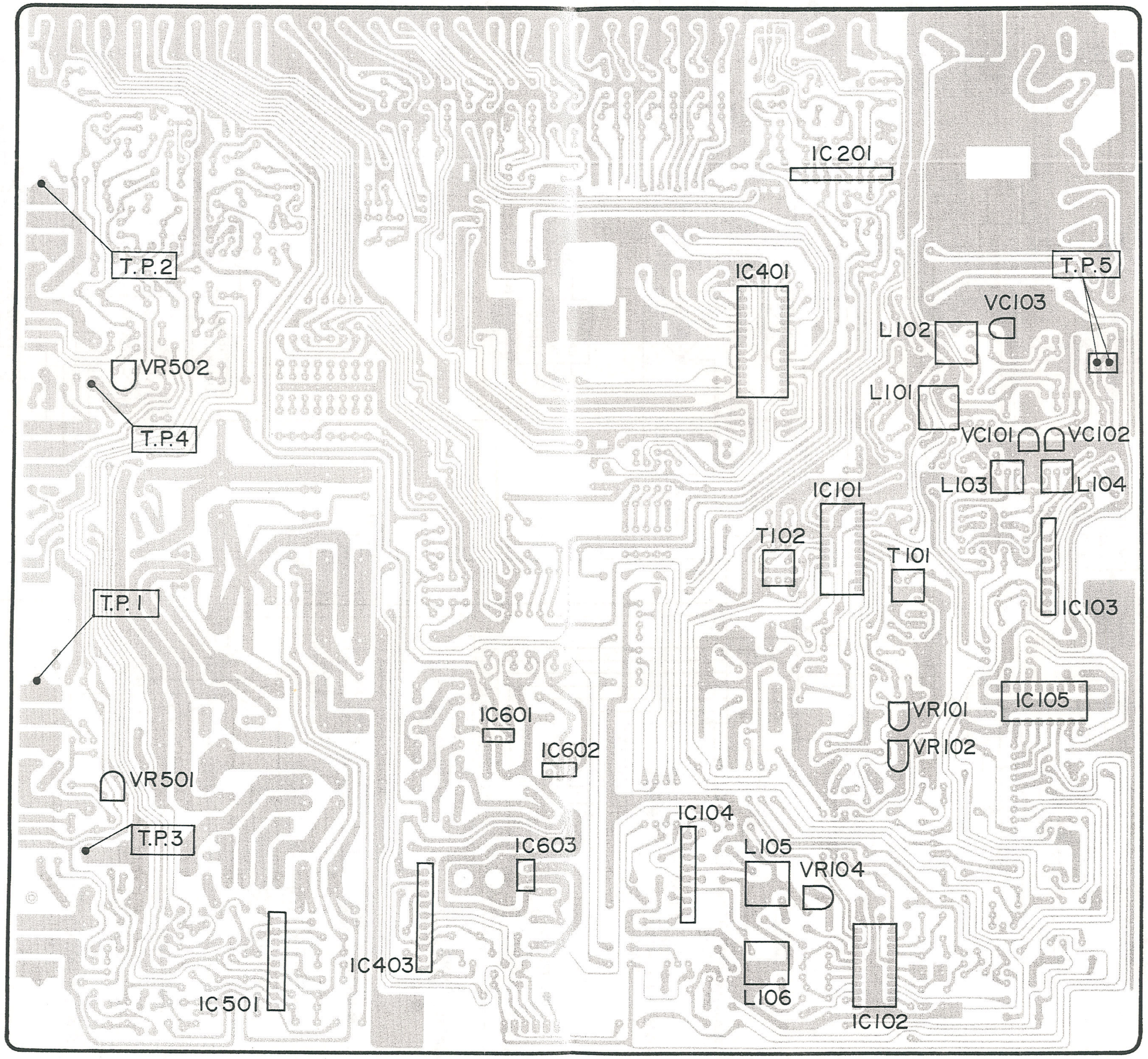
Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

Adjustment Locations <UZ/UQ Model only>


T.P.2
VR502
T.P.4
T.P.1
VR501
T.P.3
IC501
IC403
IC601
IC602
IC603
IC201
IC401
L102
VC103
T.P.5
VC102
L104
IC101
T102
T101
IC103
IC105
VR101
VR102
IC104
L105
VR104
L106
IC102

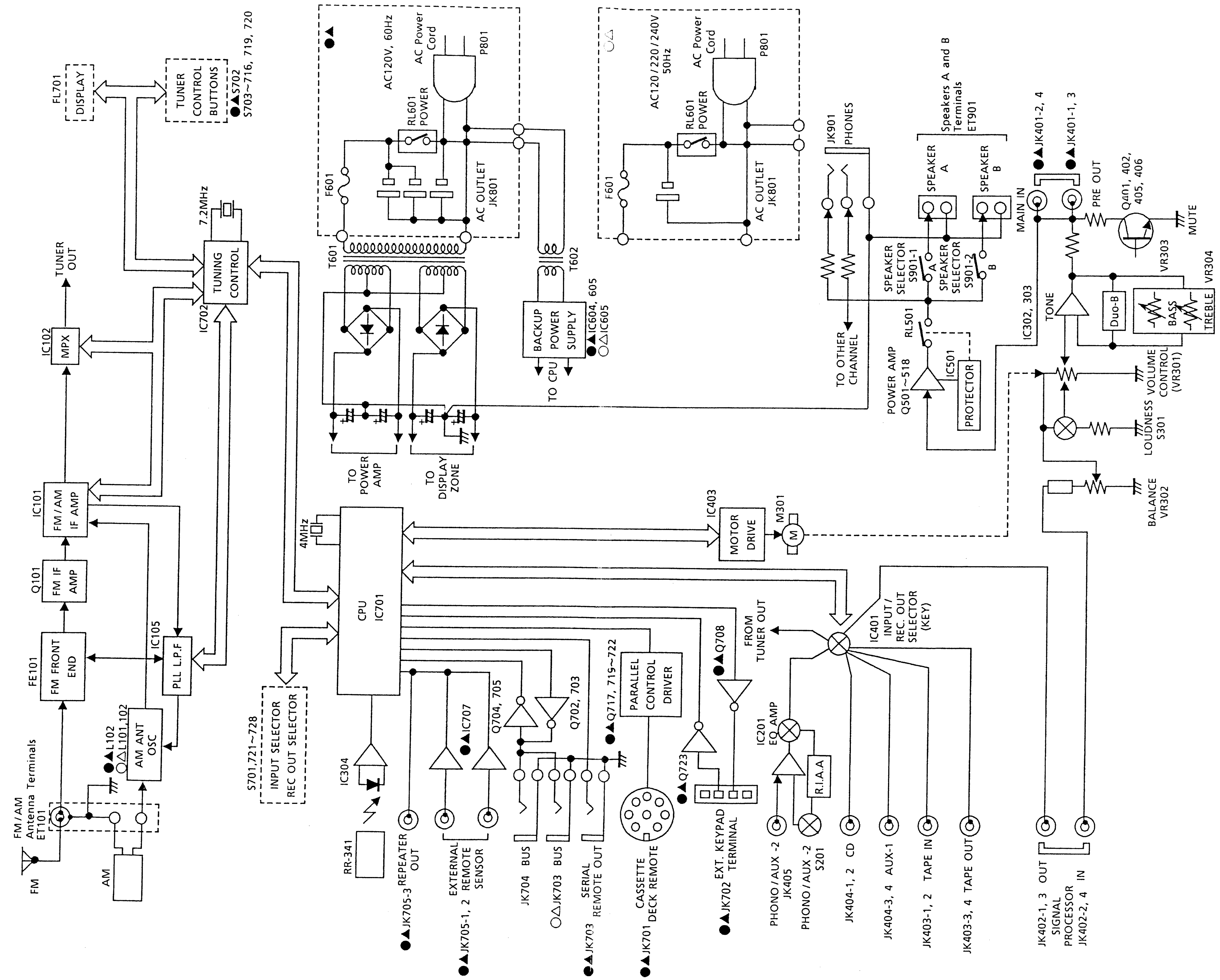
Main P.C.Board (Component Side)

Adjustment Locations <AD Model only>


IC201
T.P.2
T.P.5
IC401
VC103
L102
L101
VR502
T.P.4
VC101
VC102
L103
L104
IC101
T102
T101
IC103
T.P.1
IC105
IC601
VR101
VR102
IC602
VR501
IC104
T.P.3
IC603
L105
VR104
IC403
L106
IC501
IC102

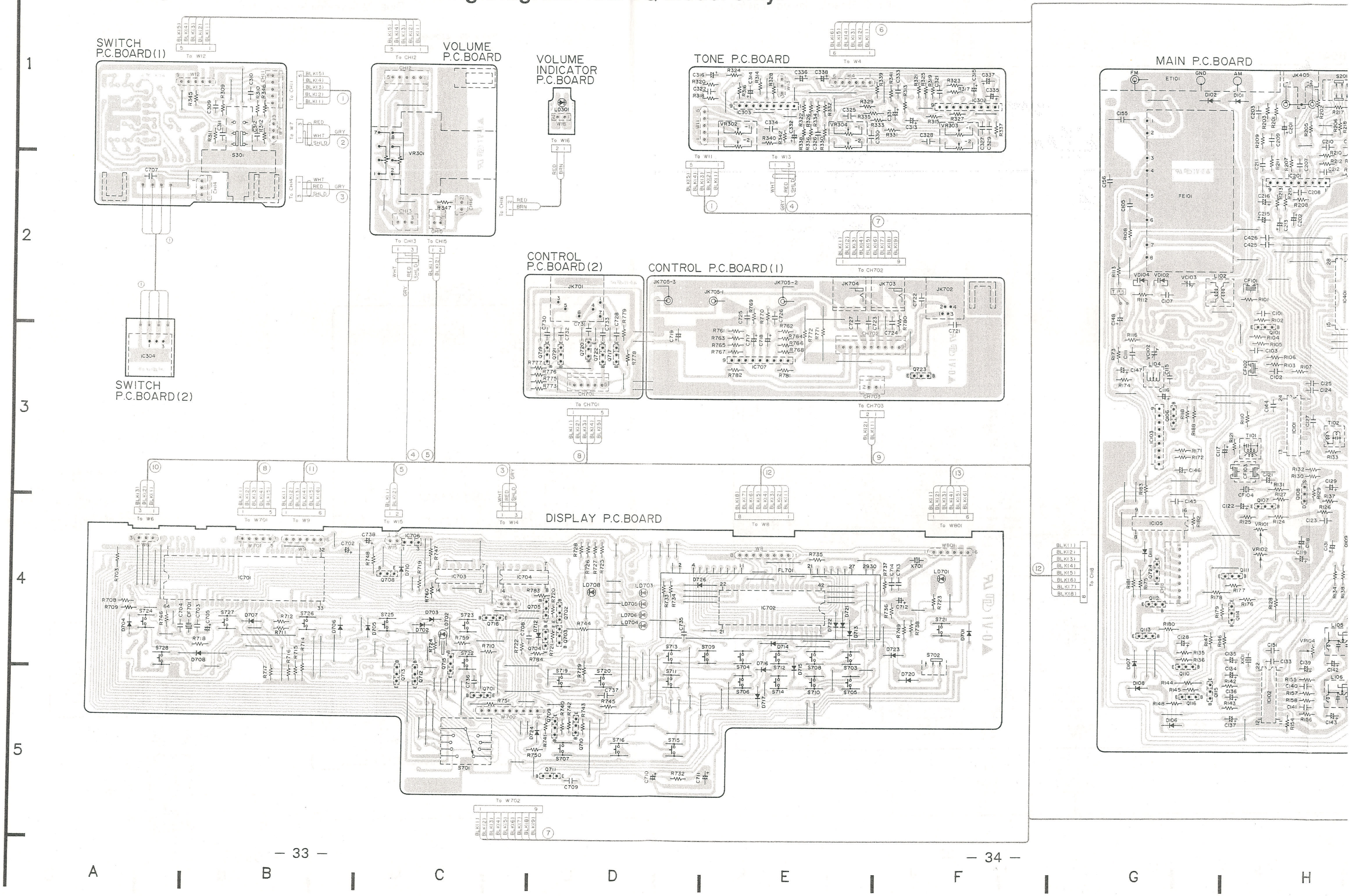
Main P.C.Board (Component Side)

Block Diagram


FL701
DISPLAY
TUNER CONTROL BUTTONS
●▲S702
S703~716, 719, 720
7.2MHz
TUNING CONTROL
IC702
TUNER OUT
IC102
MPX
IC101
FM/AM IF AMP
Q101
FM IF AMP
FE101
FM FRONT END
IC105
PLL L.P.F
●▲L102
○△L101,102
AM ANT OSC
FM/AM Antenna Terminals ET101
FM
AM
●▲
AC120V, 60Hz
AC Power Cord
P801
RL601 POWER
F601
AC OUTLET JK801
T601
TO POWER AMP
TO DISPLAY ZONE
T602
BACKUP POWER SUPPLY
●▲IC604, 605
○△IC605
TO CPU
○△
AC120/220/240V 50Hz
AC Power Cord
P801
RL601 POWER
F601
AC OUTLET JK801
JK901 PHONES
TO OTHER CHANNEL
SPEAKER SELECTOR S901-1
A
SPEAKER SELECTOR S901-2
B
SPEAKER A
SPEAKER B
Speakers A and B Terminals ET901
RL501
POWER AMP Q501~518
IC501
PROTECTOR
●▲JK401-2, 4
●▲JK401-1, 3
MAIN IN
PRE OUT
Q401, 402, 405, 406
MUTE
VR303
VR304
IC302, 303
TONE
Duo-B
BASS
TREBLE
VOLUME CONTROL (VR301)
LOUDNESS S301
BALANCE VR302
4MHz
CPU IC701
IC403
MOTOR DRIVE
M301
M
S701,721~728
INPUT SELECTOR
REC OUT SELECTOR
IC304
RR-341
●▲JK705-3 REPEATER OUT
●▲IC707
●▲JK705-1, 2 EXTERNAL REMOTE SENSOR
Q704, 705
Q702, 703
JK704 BUS
○△JK703 BUS
●▲JK703 SERIAL REMOTE OUT
●▲Q717, 715~722
PARALLEL CONTROL DRIVER
●▲JK701 CASSETTE DECK REMOTE
●▲Q723
●▲Q708
●▲JK702 EXT. KEYPAD TERMINAL
FROM TUNER OUT
IC401 INPUT/REC. OUT SELECTOR (KEY)
IC201 EQ AMP
R.I.A.A
PHONO/AUX-2 JK405
PHONO/AUX-2 S201
JK404-1, 2 CD
JK404-3, 4 AUX-1
JK403-1, 2 TAPE IN
JK403-3, 4 TAPE OUT
JK402-1, 3 OUT
SIGNAL PROCESSOR
JK402-2, 4 IN

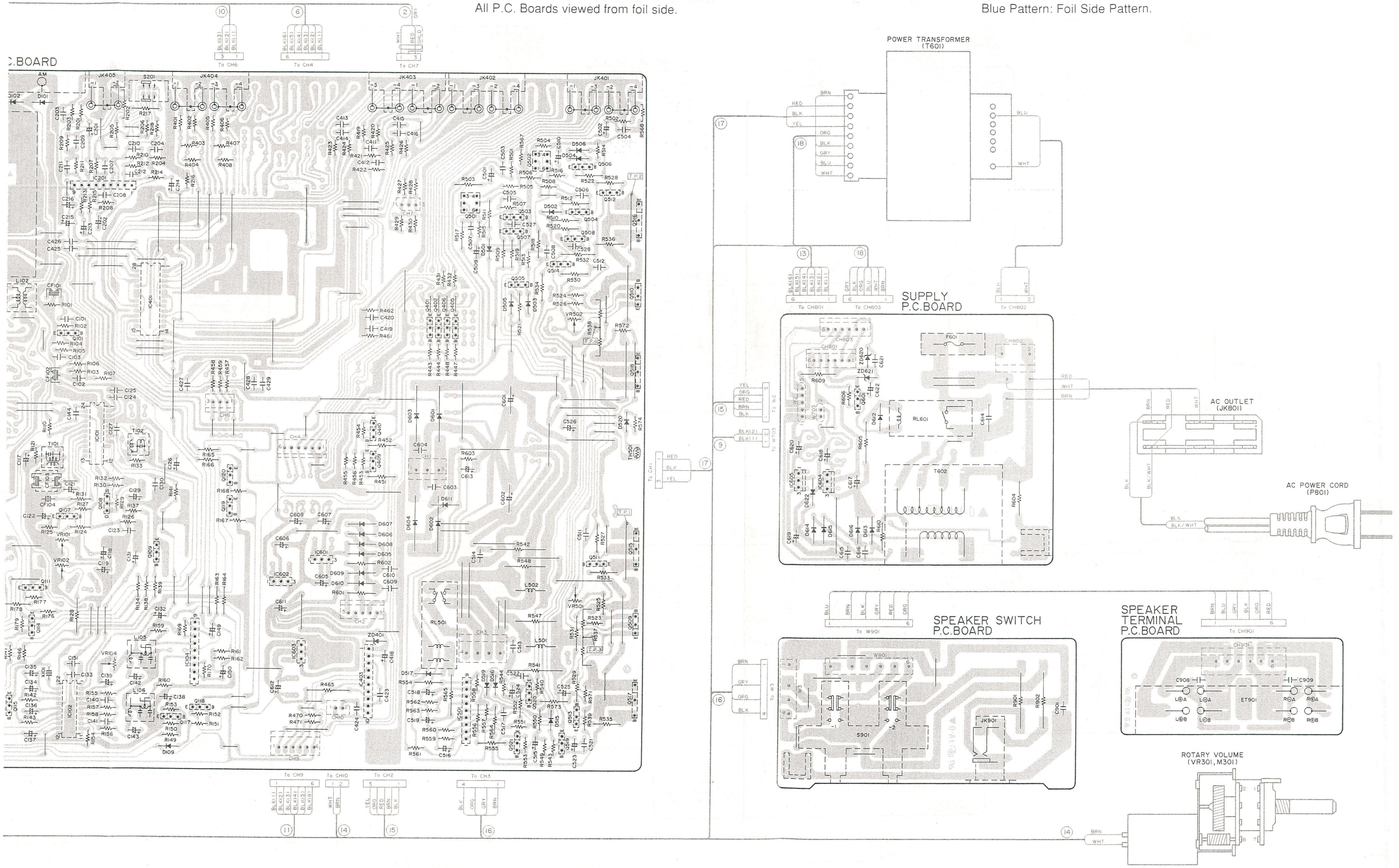
Notes : ○ : For With Safety Regulations Version (Black Type) [AD],
△ : For With Safety Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

Parts-Layout on P.C.Boards and Wiring Diagram <UZ/UQ Model only>

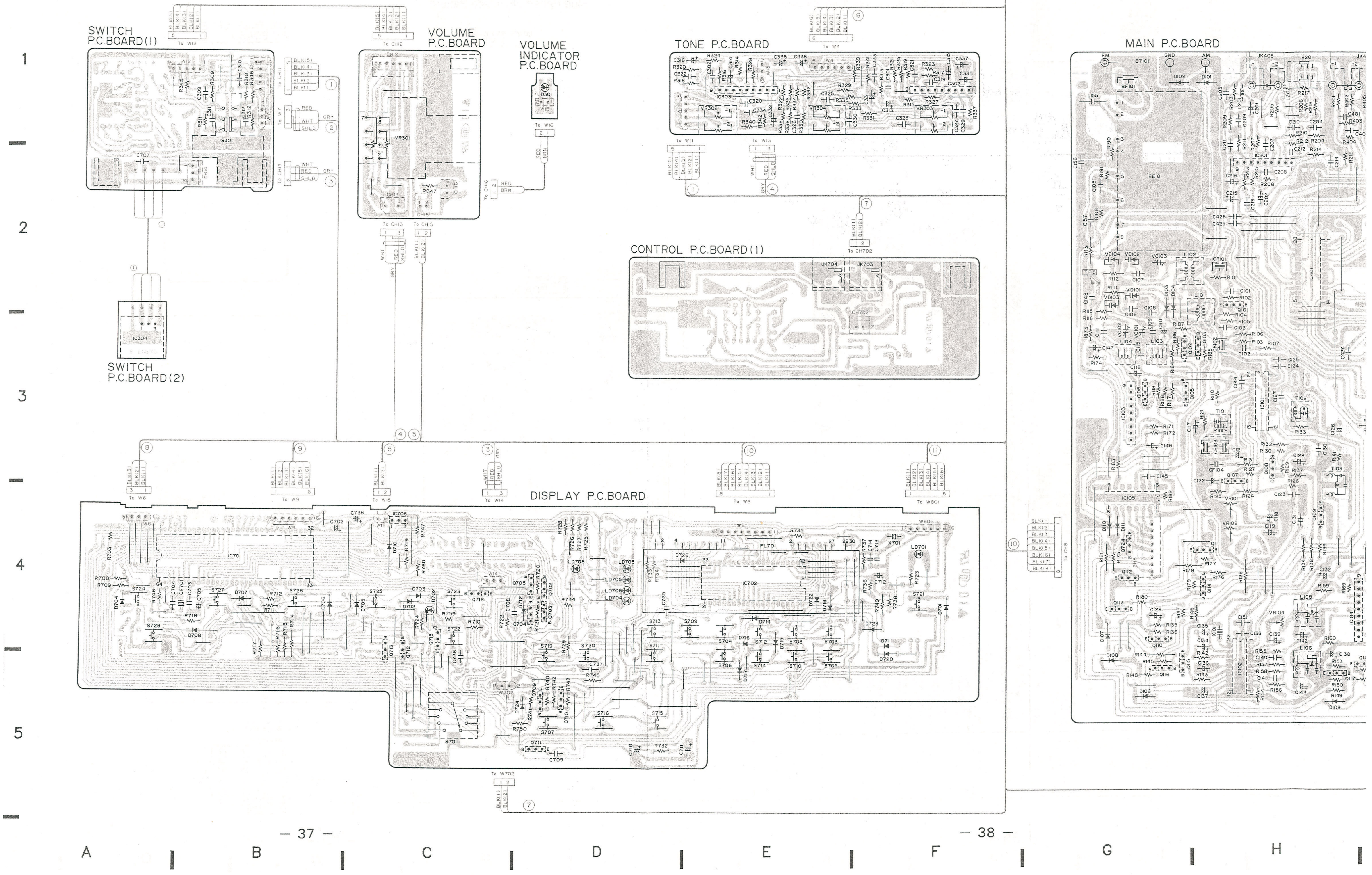

SWITCH P.C.BOARD(1)
VOLUME P.C.BOARD
VOLUME INDICATOR P.C.BOARD
TONE P.C.BOARD
MAIN P.C.BOARD
SWITCH P.C.BOARD(2)
CONTROL P.C.BOARD(2)
CONTROL P.C.BOARD(1)
DISPLAY P.C.BOARD
1
2
3
4
5
A
B
C
D
E
F
G
H

All P.C. Boards viewed from foil side.

Blue Pattern: Foil Side Pattern.

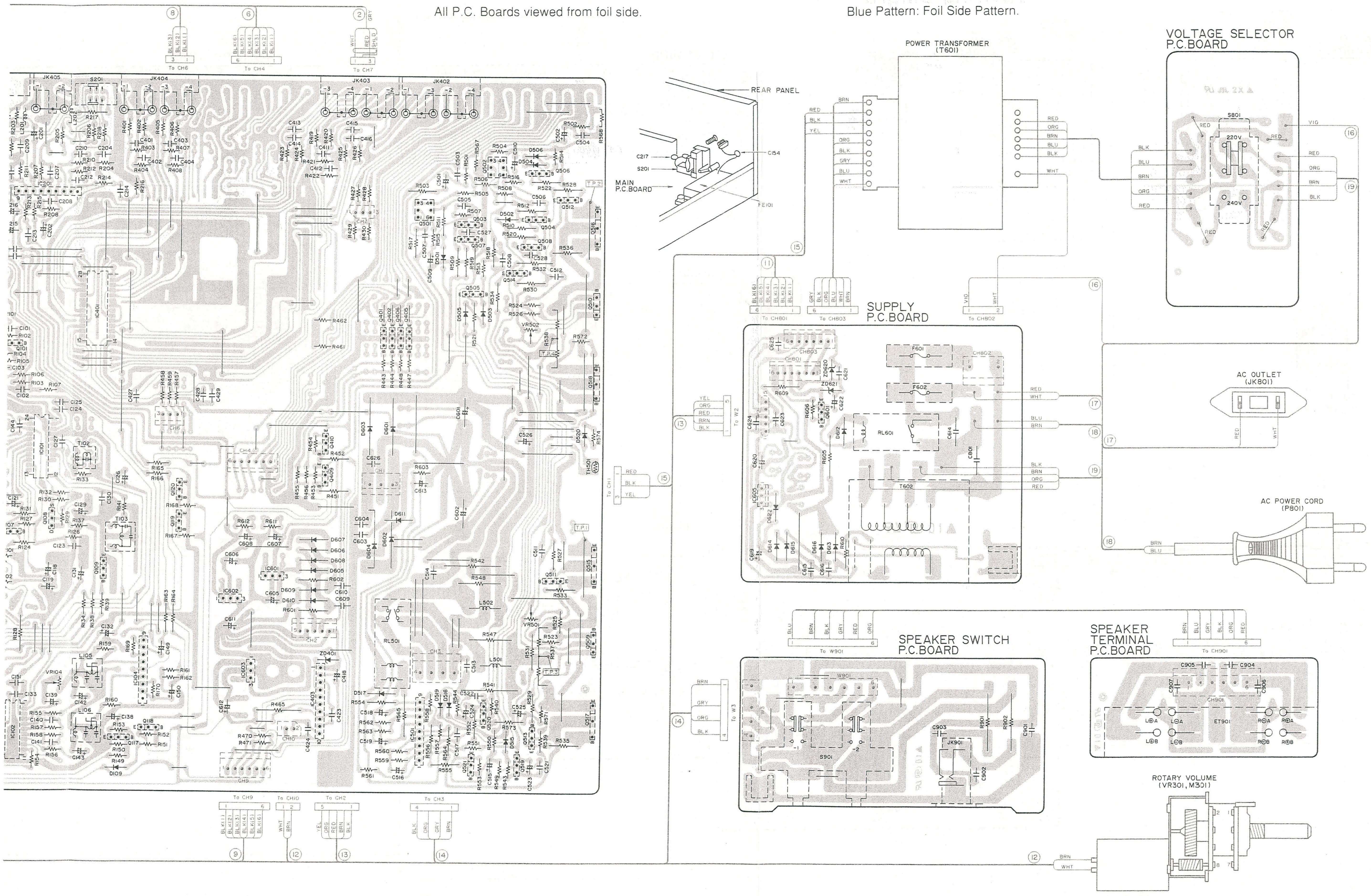

.BOARD
To CH6
To CH4
To CH7
JK405
S201
JK404
JK403
JK402
JK401
IC201
IC401
IC101
IC601
IC602
IC603
IC104
IC403
IC501
IC102
RL501
CH1
CH2
CH3
CH4
CH5
CH6
CH9
CH10
T.P.1
T.P.2
T.P.3
T.P.4
TH501
POWER TRANSFORMER
(T601)
BRN
RED
BLK
YEL
ORG
GRY
BLU
WHT
To CH801
To CH803
To CH802
SUPPLY
P.C.BOARD
CH801
CH802
CH803
F601
RL601
T602
AC OUTLET
(JK801)
AC POWER CORD
(P801)
BLK/WHT
To W2
To W703
To CH1
To W901
To CH901
To W3
SPEAKER SWITCH
P.C.BOARD
W901
S901
JK901
SPEAKER
TERMINAL
P.C.BOARD
CH901
ET901
To CH9
To CH10
To CH2
To CH3
ROTARY VOLUME
(VR301, M301)
⑩
⑥
②
⑰
⑱
⑬
⑮
⑨
⑯
⑪
⑭

Parts-Layout on P.C.Boards and Wiring Diagram <AD Model only>

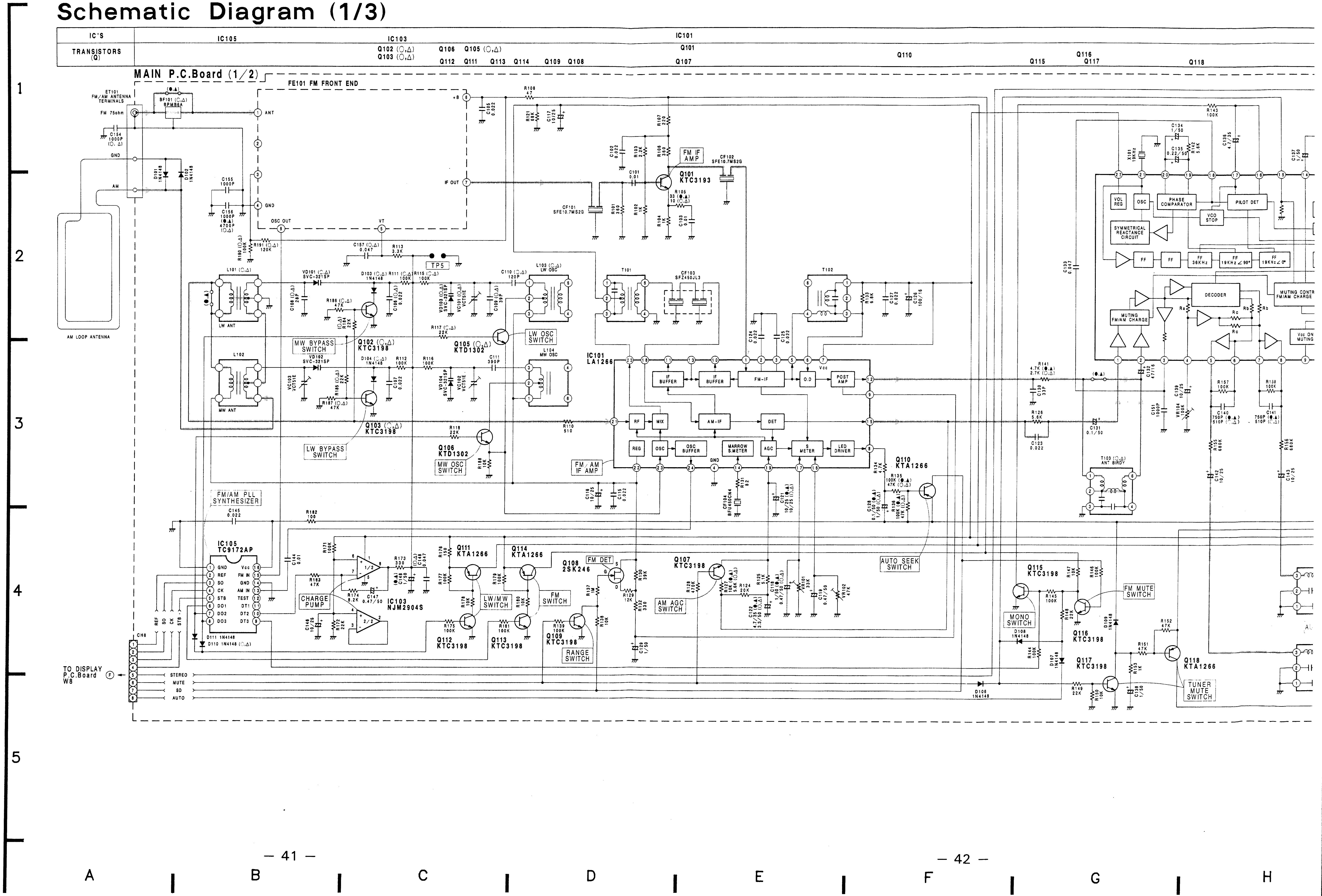

SWITCH P.C.BOARD(1)
VOLUME P.C.BOARD
VOLUME INDICATOR P.C.BOARD
TONE P.C.BOARD
MAIN P.C.BOARD
CONTROL P.C.BOARD(1)
SWITCH P.C.BOARD(2)
DISPLAY P.C.BOARD
S301
VR301
VR302
VR303
VR304
IC302
IC303
IC304
IC701
IC702
FL701
S701
FE101
IC101
IC102
IC103
IC104
IC105
IC201
IC401
JK703
JK704
JK405
CH702
To W12
To CH12
To W16
To W4
To W11
To W13
To CH702
To CH13
To CH15
To CH16
To W6
To W9
To W15
To W14
To W8
To W801
To W702
To CH8
FM
GND
AM
1
2
3
4
5
A
B
C
D
E
F
G
H

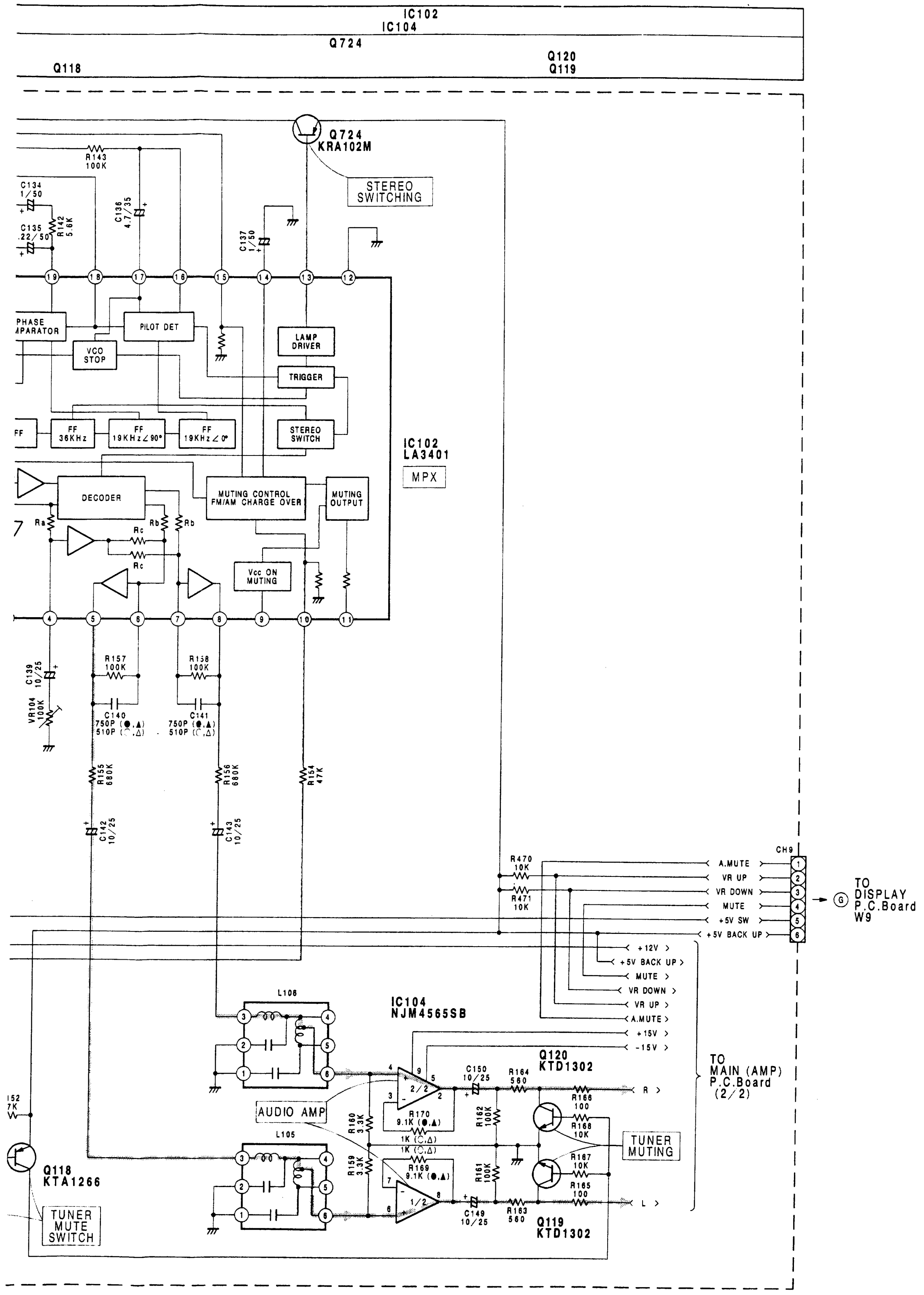
All P.C. Boards viewed from foil side.

Blue Pattern: Foil Side Pattern.


VOLTAGE SELECTOR P.C.BOARD
S801
220V
240V
POWER TRANSFORMER (T601)
REAR PANEL
MAIN P.C.BOARD
C217
S201
C154
FE101
SUPPLY P.C.BOARD
F601
F602
RL601
T602
CH801
CH802
CH803
AC OUTLET (JK801)
AC POWER CORD (P801)
SPEAKER SWITCH P.C.BOARD
S901
JK901
W901
SPEAKER TERMINAL P.C.BOARD
CH901
ET901
ROTARY VOLUME (VR301, M301)
JK405
S201
JK404
JK403
JK402
IC401
IC101
IC201
IC601
IC602
IC603
IC403
IC104
RL501
To CH6
To CH4
To CH7
To CH1
To W2
To W3
To CH801
To CH803
To CH802
To W901
To CH901
To CH9
To CH10
To CH2
To CH3
RED
BLK
YEL
ORG
BRN
BLU
GRY
WHT
V10
⑧
⑥
②
⑮
⑪
⑯
⑲
⑰
⑱
⑬
⑭
⑫
⑨

Schematic Diagram (1/3)


IC'S
IC105
IC103
IC101
TRANSISTORS (Q)
Q102 (○,△)
Q103 (○,△)
Q106
Q105 (○,△)
Q112
Q111
Q113
Q114
Q109
Q108
Q101
Q107
Q110
Q115
Q116
Q117
Q118
MAIN P.C.Board (1/2)
FE101 FM FRONT END
ET101 FM/AM ANTENNA TERMINALS
FM 75ohm
GND
AM
AM LOOP ANTENNA
BF101 (○,△) BPM86A
ANT
GND
IF OUT
OSC OUT
VT
+B
TP5
D101 1N4148
D102 1N4148
L101 (○,△)
LW ANT
L102
MW ANT
VD101 (○,△) SVC-321SP
VD102 SVC-321SP
D103 (○,△) 1N4148
D104 (○,△) 1N4148
MW BYPASS SWITCH
Q102 (○,△) KTC3198
LW BYPASS SWITCH
Q103 (○,△) KTC3198
L103 (○,△) LW OSC
L104 MW OSC
LW OSC SWITCH
Q105 (○,△) KTD1302
MW OSC SWITCH
Q106 KTD1302
FM IF AMP
Q101 KTC3193
CF101 SFE10.7MS2G
CF102 SFE10.7MS2G
T101
CF103 SFZ450JL3
T102
IC101 LA1266
IF BUFFER
FM-IF
Q.D
POST AMP
RF
MIX
AM-IF
DET
REG
OSC
OSC BUFFER
MARROW S.METER
AGC
S METER
LED DRIVER
Vcc
GND
FM/AM IF AMP
CF104 BFU450C-N4
Q110 KTA1266
AUTO SEEK SWITCH
FM/AM PLL SYNTHESIZER
IC105 TC9172AP
GND
REF
SO
CK
STB
DO1
DO2
DO3
Vcc
FM IN
GND
AM IN
TEST
DT1
DT2
DT3
D111 1N4148
D110 1N4148 (○,△)
CHARGE PUMP
IC103 NJM2904S
Q111 KTA1266
Q114 KTA1266
LW/MW SWITCH
FM SWITCH
Q112 KTC3198
Q113 KTC3198
Q108 2SK246
FM DET
Q109 KTC3198
RANGE SWITCH
Q107 KTC3198
AM AGC SWITCH
VR101 33K
VR102 47K
CH8
REF
SO
CK
STB
TO DISPLAY P.C.Board W8
STEREO
MUTE
SD
AUTO
X101 19KHz
VOL REG
OSC
PHASE COMPARATOR
PILOT DET
VCO STOP
SYMMETRICAL REACTANCE CIRCUIT
FF
FF
FF 38KHz
FF 19KHz∠90°
FF 19KHz∠0°
DECODER
MUTING FM/AM CHARGE
MUTING CONTROL FM/AM CHARGE
Vcc ON MUTING
Ra
Rb
Rc
T103 (○,△) ANT BIRDY
Q115 KTC3198
MONO SWITCH
D108 1N4148
Q116 KTC3198
FM MUTE SWITCH
D109 1N4148
D107 1N4148
D106 1N4148
Q117 KTC3198
Q118 KTA1266
TUNER MUTE SWITCH
1
2
3
4
5
A
B
C
D
E
F
G
H


IC102
IC104
Q724
Q118
Q120
Q119
Q724
KRA102M
STEREO SWITCHING
R143
100K
C134
1/50
C135
.22/50
R142
5.6K
C136
4.7/35
C137
1/50
PHASE
PARATOR
PILOT DET
VCO STOP
LAMP DRIVER
TRIGGER
FF
FF 36KHz
FF 19KHz∠90°
FF 19KHz∠0°
STEREO SWITCH
IC102
LA3401
MPX
DECODER
MUTING CONTROL FM/AM CHARGE OVER
MUTING OUTPUT
Ra
Rb
Rb
Rc
Rc
Vcc ON MUTING
C139
10/25
VR104
100K
R157
100K
R158
100K
C140
750P (●,▲)
510P (○,△)
C141
750P (●,▲)
510P (○,△)
R155
680K
R156
680K
R154
47K
C142
10/25
C143
10/25
R470
10K
R471
10K
CH9
A.MUTE
VR UP
VR DOWN
MUTE
+5V SW
+5V BACK UP
TO DISPLAY P.C.Board W9
+12V
+5V BACK UP
MUTE
VR DOWN
VR UP
A.MUTE
+15V
-15V
L106
L105
IC104
NJM4565SB
AUDIO AMP
R170
9.1K (●,▲)
1K (○,△)
R169
9.1K (●,▲)
R160
3.3K
R159
3.3K
C150
10/25
C149
10/25
R164
560
R163
560
R162
100K
R161
100K
R166
100
R168
10K
R167
10K
R165
100
Q120
KTD1302
Q119
KTD1302
R
L
TO MAIN (AMP) P.C.Board (2/2)
TUNER MUTING
Q118
KTA1266
TUNER MUTE SWITCH
152
7K

NOTE

1, All resistance values are in ohms. K = 1,000 M = 1,000,000

2, All capacitance values are in micro farads. P = $\frac{1}{1,000,000}$

3, ● : For U.S.A Version [UZ]
▲ : For Canada Version [UQ]
○ : For With Safety RegulationS VerSion(Black type) [AD]
△ : For With Safety Ragulations Version(Champagne Gold type) [AD]
Others: Common

Mesuring Condition

1, Power supply voltage ; AC120V (●,▲),AC120/220/24(○,△)
2, Measuring Meter ; Multi meter
3, Measuring point reference ; Between GND
4, Measuring Conditions ; No signal input

	E	C	B	
Q101	2.6V/0V	9.7V/0V	3.2V/0V	FM/AM
○△ Q102	0V	-	0V	
○△ Q103	0V	-	0V	
○△ Q105	3.1V	3.9V	0V	
Q106	3.1V/3.6V	3.9V/3.6V	3.2V/0V	FM/AM
Q107	1.5V	1.5V	0V	
Q109	0V	0V	0V	
Q110	5.3V	0V	5.3V	
Q111	11.9V/11.7V	0V/11.8V	11.8V/11V	FM/AM
Q112	0V	11.8V/0.1V	0V/0.6V	FM/AM
Q113	0V	0.1V/11.8V	0.6V/0V	FM/AM
Q114	11.9V	11.9V/0V	11.2V/11.9V	FM/AM
Q115	0V	0V/2.8V	0.6V/0V	MONO/ST
Q116	0V	9V/0V	0V	FM/AM
Q117	0V	0V/5.4V	0.6V/0V	FM/AM
Q118	5.4V	5.4V/0V	4.8V/5.4V	FM/AM
Q119	0V	0V	0.6V/0V	FM/AM
Q120	0V	0V	0.6V	
Q401	0V	0V	-13.4V	
Q402	0V	0V	-13.4V	
Q405	0V	0V	-13.4V	
Q406	0V	0V	-13.4V	
Q409	5.4V	-13.4V	5.4V	
Q410	5.4V	-13.4V	5.4V	
Q503	-38.6V	-37.6V	-38.1V	
Q504	-39.1V	-38.1V	-38.4V	
Q505	38V	1.1V	37.5V	
Q506	38V	1.1V	37.5V	
Q507	-38V	-1.1V	-37.5V	
Q508	-37.2V	-1.1V	-37.9V	
Q509	-1.1V	1.1V	-0.5V	
Q510	-1.1V	1.1V	-0.5V	
Q511	0.5V	39V	1.1V	
Q512	0.5V	38.9V	1.1V	
Q513	-0.5V	-39V	-1.1V	
Q514	-0.5V	-39.1V	-1.1V	
Q515	0V	39V	0.5V	
Q516	0V	39V	0.5V	
Q517	0V	-39V	-0.5V	
Q518	0V	-39V	-0.5V	
Q519	0V	37.4V	0V	
Q520	0V	37.4V	0V	
Q521	38.7V	-0.7V	38.6V	
Q601	0V	0V	0.7V	
●▲ Q701	5.4V	0V	5.4V	
Q702	5.4V	0V	5.4V	
Q703	0V	5.2V	0V	
Q704	5.2V	0V	5.2V	
Q705	0V	5.4V	0V	
●▲ Q708	0V	1.3V	0.1V	
Q709	0V	0V	0.6V	
Q710	5.4V	5.3V	4.6V	
Q711	4.7V	5.4V	5.4V	
Q712	0V	1.3V	0.2V	
Q713	0V	1.2V	0.2V	
Q715	0V	4.7V	0V	
Q716	0V	4.2V	0V	
●▲ Q717	0V	1.1V	0.1V	
●▲ Q719	0V	1.1V	0.1V	
●▲ Q720	0V	1.2V	0.1V	
●▲ Q721	0V	1.1V	0.1V	
●▲ Q722	0V	1.2V	0V	
●▲ Q723	0V	5.4V	0V	
Q724	5.4V	0V	5.4V	

	S	G	D
Q108	3.9V	0V	3.6V

	Q501	Q502
1	0.6V	0.6V
2	-37.5V	-37.5V
3	0V	0V
4	0V	0V
5	-38V	-38V
6	0.6V	0.6V

IC101

1	2.5V/1V	FM/AM
2	2.5V/1V	FM/AM
3	2.5V/1V	FM/AM
4	0V	
5	12V	
6	12V	
7	12V	
8	5.2V	
9	3.7V	
10	2.3V	
11	2.7V	
12	3.2V	
13	0V	
14	1.5V	
15	1.5V	
16	0V	
17	0V	
18	2.5V/1V	FM/AM
19	1.5V	
20	0V/11.9V	FM/AM
21	3.9V/3.6V	FM/AM
22	3.9V/3.3V	FM/AM
23	3.1V/3.6V	FM/AM
24	2.3V	

IC103

1	12V	
2	2.1V	
3	2.1V	
4	2.1V	
5	0V	
6	2.1V	
7	2.1V	
8	2V/4.7V	FM/AM
9	-	

IC401

1	-14.8V
2	0V
3	0V
4	0V
5	0V
6	0V
7	0V
8	0V
9	0V
10	0V
11	0V
12	0V
13	0V
14	0V
15	0.1V
16	0.1V
17	0V
18	0V
19	0V
20	0V
21	0V
22	0V
23	0V
24	0V
25	0V
26	0V
27	0V
28	15.3V

IC403

1	0V
2	0.5V
3	0.7V
4	0.7V
5	2.5V
6	2.5V
7	12V
8	12V
9	0.7V
10	0.5V

IC102

1	3.2V	
2	3.2V	
3	3.2V	
4	3.2V	
5	3.1V	
6	3.2V	
7	3.2V	
8	3.1V	
9	3.7V/3.2V	FM/AM
10	0V/7.7V	FM/AM
11	3.8V/0V	FM/AM
12	0V	
13	5.4V	
14	4.9V/0V	FM/AM
15	4V/0V	FM/AM
16	2.4V	
17	2.8V/8.8V	FM/AM
18	2.7V/4.9V	FM/AM
19	2.7V/4.9V	FM/AM
20	2.7V/6.9V	FM/AM
21	3.3V/2.2V	FM/AM
22	12V	

IC105

1	0V	
2	2.4V	
3	0V	
4	0V	
5	0V	
6	4.7V	
7	0V	
8	0V	
9	4.7V	MONO
10	2.1V	
11	1V	
12	0V	
13	0V/2.5V	FM/AM
14	0V	
15	2.4V/0V	FM/AM
16	4.7V	

	IC104	IC201	IC302	IC303	IC501	●▲ IC707
1	-	-	15.4V	-	-0.7V	5.4V
2	0V	0V	0V	0V	0V	5.4V
3	0V	0V	0V	0V	0.1V	0.4V
4	0V	0V	0V	0V	0V	0.5V
5	-14.8V	-14.8V	-14.8V	-14.8V	-0.7V	0V
6	0V	0V	0V	0V	1V	0.5V
7	0V	0V	0V	0V	0V	0.4V
8	0V	0V	0V	0V	1.3V	5.4V
9	15.3V	15.3V	-	15.4V	2.8V	-

	IC304	IC601	IC602	IC603	●▲ IC604	IC605	IC706
1	5.4V	15.1V	-14.8V	12V	14.9V	5.4V	0V
2	0.3V	0V	-20.6V	0V	0V	0.5V	5.4V
3	0V	19.5V	0V	19.5V	20.6V	20.6V	5.4V

IC701

1	0V	33	1.5V
2	0V	34	1.5V
3	0V	35	1.5V
4	0V	36	1.2V
5	0V	37	3.7V
6	0V	38	0V
7	2V	39	0V
8	2V	40	0V
9	0V	41	0.2V
10	2V	42	0.2V
11	2.2V	43	0.2V
12	2.2V	44	0.4V
13	2.1V	45	5.4V
14	5.5V	46	5.4V
15	5.5V	47	5.4V
16	0V	48	5.4V
17	0V	49	5.4V
18	0V	50	2.5V
19	0V	51	2.8V
20	0V	52	5.4V
21	0V	53	3.7V
22	0V	54	5.4V
23	5.4V	55	5.4V
24	5.4V	56	5.4V
25	2.5V	57	0V
26	2.5V	58	5.4V
27	0.3V	59	0V
28	4.7V	60	0V
29	4.7V	61	0V
30	4.7V	62	0V
31	0V	63	5.4V
32	0V	64	5.4V

●▲ IC703

1	5.4V
2	5.4V
3	0V
4	5.4V
5	0V
6	5.2V
7	0V
8	5.2V
9	0V
10	0V
11	0V
12	5.3V
13	5.4V
14	5.4V

●▲ IC704

1	1.5V
2	1.5V
3	0V
4	0V
5	0V
6	5.4V
7	0V
8	5.4V
9	0V
10	0V
11	0V
12	5.4V
13	5.4V
14	5.4V

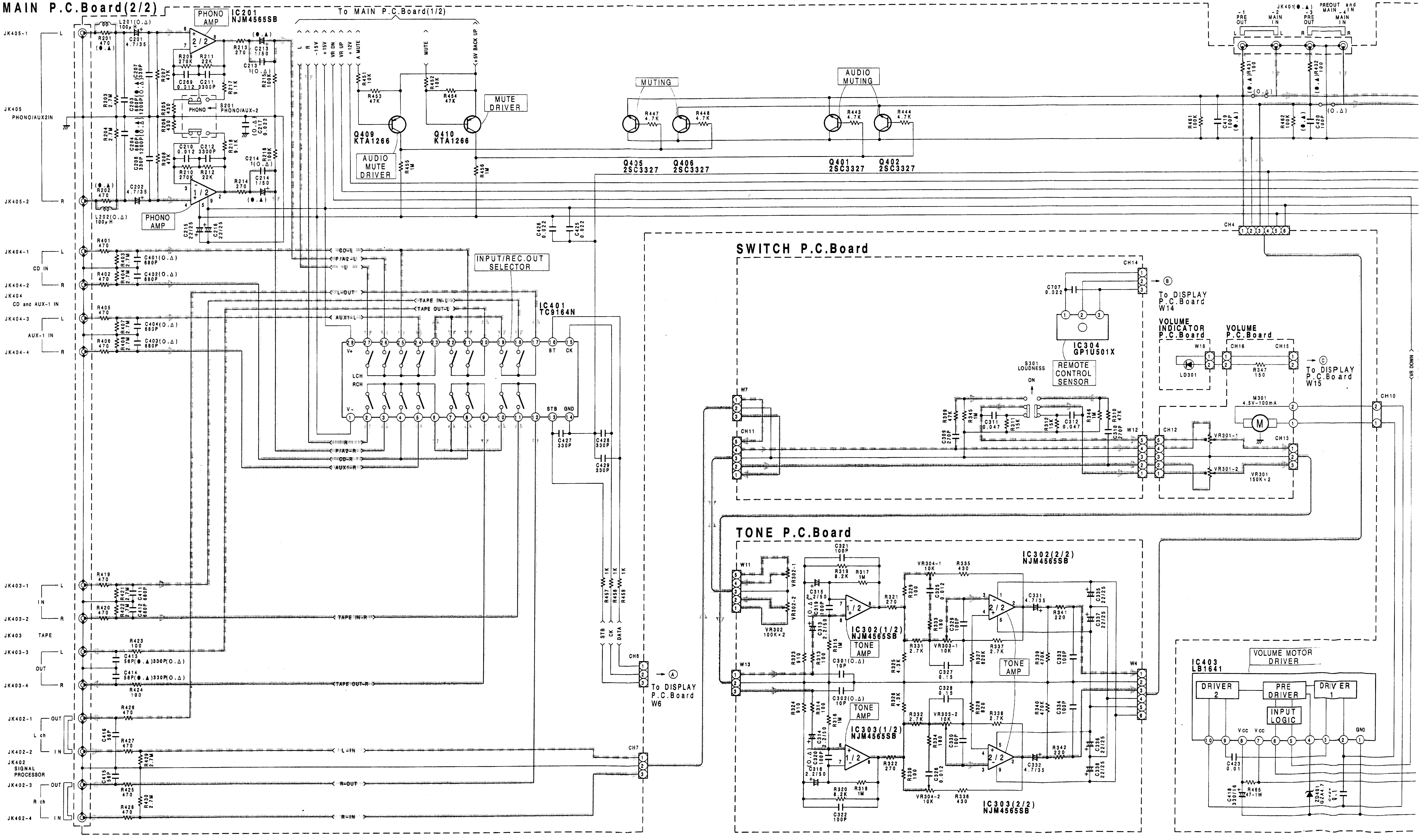
IC702

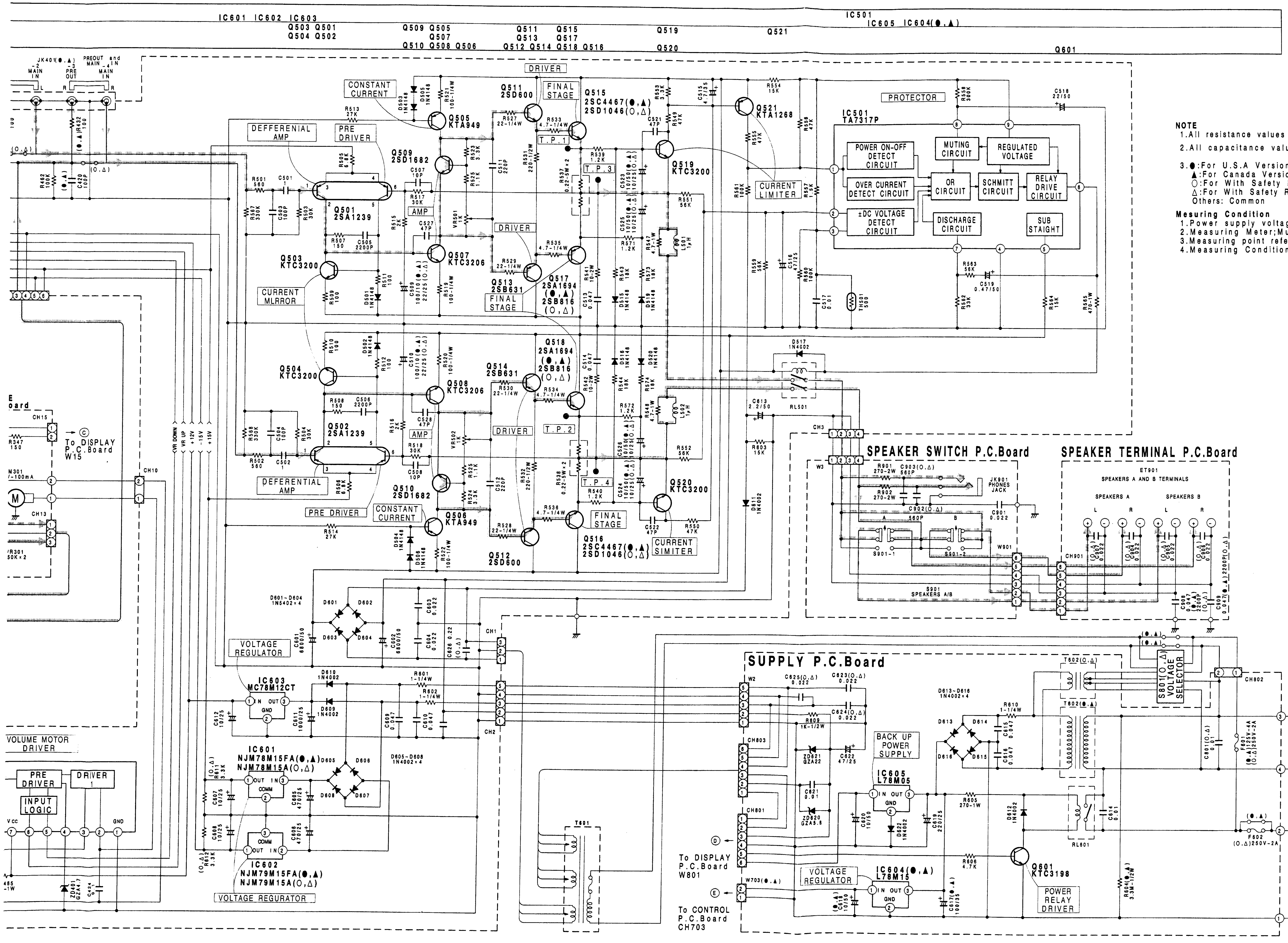
1	0V
2	0V
3	-22V
4	-22V
5	-13.9V
6	-19.4V
7	-19.4V
8	-19.4V
9	-19.4V
10	-19.3V
11	-19.3V
12	-19.3V
13	-13.6V
14	-10.8V
15	-10.8V
16	-13.6V
17	-13.6V
18	-8.1V
19	-19.1V
20	-21.9V
21	-22.4V
22	0V
23	0V
24	0V
25	0V
26	0V
27	0V
28	0V
29	0V
30	4.7V
31	0V
32	0V
33	0V
34	0V
35	0V
36	0V
37	2.8V
38	4.7V
39	4.1V
40	2.1V
41	2.2V
42	4.7V

R-341

Schematic Diagram (2/3)

IC'S	IC201	IC401	IC302(1/2) IC303(1/2)	IC303(2/2) IC302(2/2)	IC304	IC403
TRANSISTORS (Q)	Q409 Q410	Q405 Q406	Q401 Q402			


MAIN P.C.Board(2/2)
PHONO AMP
IC201 NJM4565SB
To MAIN P.C.Board(1/2)
L
R
-15V
+15V
VR DN
VR UP
+12V
A MUTE
MUTE
+5V BACK UP
MUTE DRIVER
AUDIO MUTE DRIVER
Q409 KTA1266
Q410 KTA1266
MUTING
AUDIO MUTING
Q405 2SC3327
Q406 2SC3327
Q401 2SC3327
Q402 2SC3327
JK401(●.▲) PREOUT and MAIN IN
PRE OUT
MAIN IN
CH4
JK405-1
JK405 PHONO/AUX2IN
JK405-2
S201 PHONO/AUX-2
JK404-1
CD IN
JK404-2
JK404 CD and AUX-1 IN
JK404-3
AUX-1 IN
JK404-4
INPUT/REC.OUT SELECTOR
IC401 TC9164N
CD-L
P/A2-L
L-OUT
TAPE IN-L
TAPE OUT-L
AUX1-L
LCH
RCH
V+
V-
BT
CK
STB
GND
R
P/A2-R
CD-R
AUX1-R
TAPE IN-R
TAPE OUT-R
L-IN
R-OUT
R-IN
STB
CK
DATA
CH6
To DISPLAY P.C.Board W6
CH7
JK403-1
IN
JK403-2
JK403 TAPE
JK403-3
OUT
JK403-4
JK402-1 OUT
L ch
JK402-2 IN
JK402 SIGNAL PROCESSOR
JK402-3 OUT
R ch
JK402-4 IN
SWITCH P.C.Board
CH14
To DISPLAY P.C.Board W14
IC304 GP1U501X
REMOTE CONTROL SENSOR
S301 LOUDNESS
ON
VOLUME INDICATOR P.C.Board
VOLUME P.C.Board
W16
CH16
CH15
LD301
R347 150
To DISPLAY P.C.Board W15
W7
CH11
W12
CH12
CH13
M301 4.5V-100mA
VR301-1
VR301-2
VR301 150K×2
CH10
VR DOWN
TONE P.C.Board
W11
VR302-1
VR302-2
VR302 100K×2
IC302(1/2) NJM4565SB
TONE AMP
IC302(2/2) NJM4565SB
TONE AMP
IC303(1/2) NJM4565SB
TONE AMP
IC303(2/2) NJM4565SB
W13
W4
VOLUME MOTOR DRIVER
IC403 LB1641
DRIVER 2
PRE DRIVER
DRIVER 1
INPUT LOGIC
Vcc
GND
A
B
C
D
E
F
G
H
1
2
3
4
5


IC601 IC602 IC603
Q503 Q501
Q504 Q502
Q509 Q505
Q507
Q510 Q508 Q506
Q511 Q515
Q513 Q517
Q512 Q514 Q518 Q516
Q519
Q520
Q521
IC501
IC605 IC604(●,▲)
Q601
JK401(●,▲) PREOUT and MAIN IN
MAIN IN
PRE OUT
DRIVER
CONSTANT CURRENT
FINAL STAGE
DEFFERENIAL AMP
PRE DRIVER
Q505 KTA949
Q511 2SD600
Q515 2SC4467(●,▲) 2SD1046(○,△)
Q521 KTA1268
Q509 2SD1682
T.P.1
T.P.3
Q519 KTC3200
Q501 2SA1239
AMP
DRIVER
Q507 KTC3206
Q513 2SB631
Q517 2SA1694 (●,▲) 2SB816 (○,△)
Q503 KTC3200
CURRENT MLRROR
CURRENT LIMITER
PROTECTOR
IC501 TA7317P
POWER ON-OFF DETECT CIRCUIT
MUTING CIRCUIT
REGULATED VOLTAGE
OVER CURRENT DETECT CIRCUIT
OR CIRCUIT
SCHMITT CIRCUIT
RELAY DRIVE CIRCUIT
±DC VOLTAGE DETECT CIRCUIT
DISCHARGE CIRCUIT
SUB STAIGHT
Q518 2SA1694 (●,▲) 2SB816 (○,△)
Q504 KTC3200
Q514 2SB631
Q508 KTC3206
T.P.2
T.P.4
Q502 2SA1239
DEFERENTIAL AMP
Q510 2SD1682
Q506 KTA949
Q512 2SD600
Q516 2SC4467(●,▲) 2SD1046(○,△)
Q520 KTC3200
CURRENT SIMITER
D517 1N4002
RL501
SPEAKER SWITCH P.C.Board
SPEAKER TERMINAL P.C.Board
JK901 PHONES JACK
S901-1
S901-2
S901 SPEAKERS A/B
ET901 SPEAKERS A AND B TERMINALS
SPEAKERS A
SPEAKERS B
CH901
W901
CH3
W3
To DISPLAY P.C.Board W15
CH10
CH13
CH15
VR DOWN
VR UP
+12V
-15V
+15V
D601~D604 1N5402×4
VOLTAGE REGULATOR
IC603 MC78M12CT
IC601 NJM78M15FA(●,▲) NJM78M15A(○,△)
IC602 NJM79M15FA(●,▲) NJM79M15A(○,△)
VOLTAGE REGURATOR
D605~D608 1N4002×4
CH1
CH2
T601
VOLUME MOTOR DRIVER
PRE DRIVER
DRIVER 1
INPUT LOGIC
SUPPLY P.C.Board
W2
CH803
CH801
BACK UP POWER SUPPLY
IC605 L78M05
D613~D616 1N4002×4
T602(○,△)
T602(●,▲)
S801(○,△) VOLTAGE SELECTOR
CH802
JK801(○,△) AC OUTLET
JK801(●,▲) AC OUTLET
P801 AC POWER CORD AC120V 60Hz(●,▲) AC120/220/240V 50Hz(○,△)
RL801
F801
F802
VOLTAGE REGULATOR
IC604(●,▲) L78M15
Q601 KTC3198
POWER RELAY DRIVER
To DISPLAY P.C.Board W801
To CONTROL P.C.Board CH703
W703(●,▲)

NOTE

1.All resistance values are in ohms. K=1,000 M=1,000,000

2.All capacitance values are in microfarads. $P=\frac{1}{1,000,000}$

3.●:For U.S.A Version[UZ]
▲:For Canada Version[UQ]
○:For With Safety Regulations Version(Black type)[AD]
△:For With Safety Regulations Version(Champagne Gold type)[AD]
Others: Common

Mesuring Condition

1.Power supply voltage;120V(●,▲),120/220/240V(○,△)
2.Measuring Meter;Multimeter
3.Measuring point reference;Between GND
4.Measuring Conditions;No signal input

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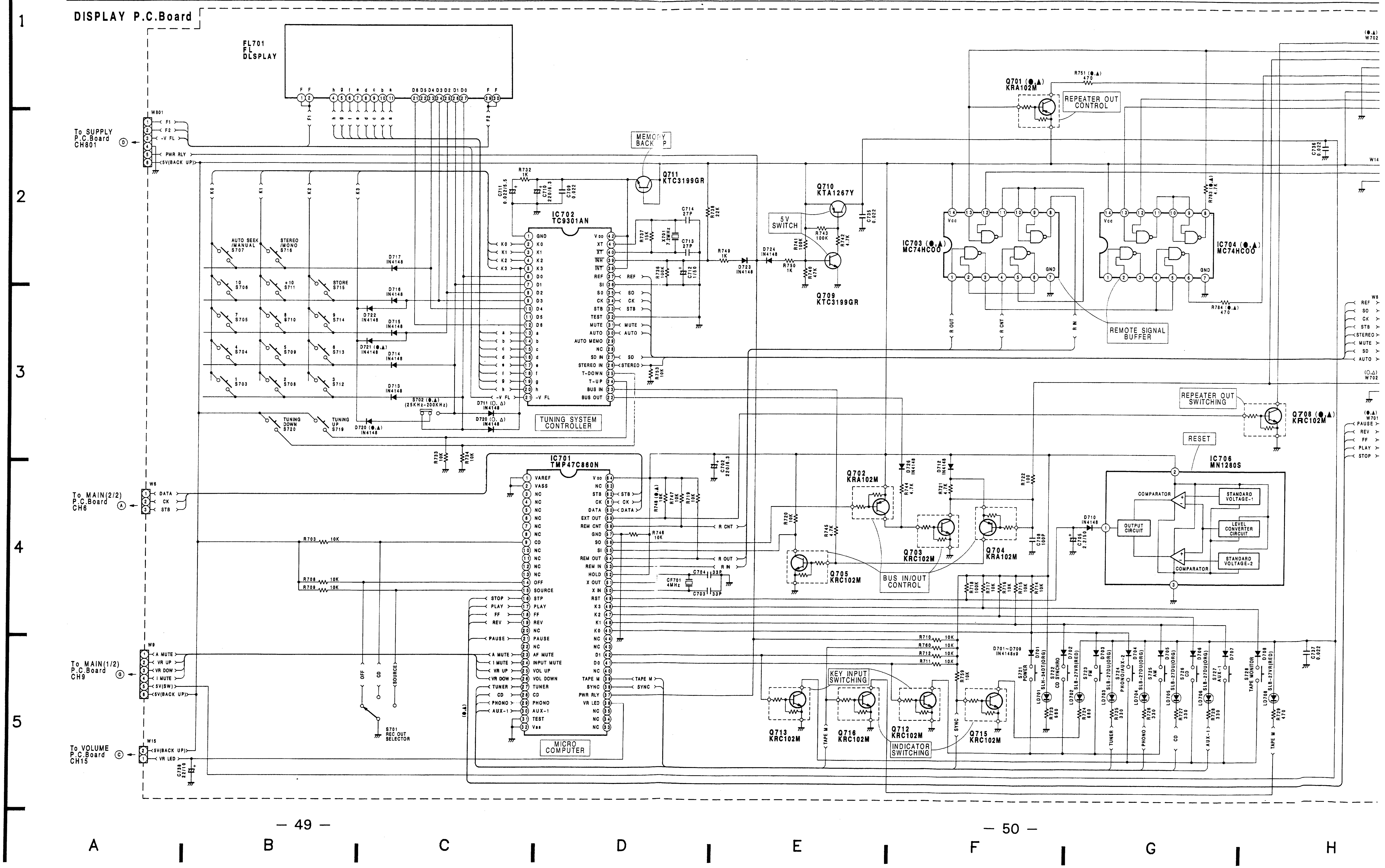
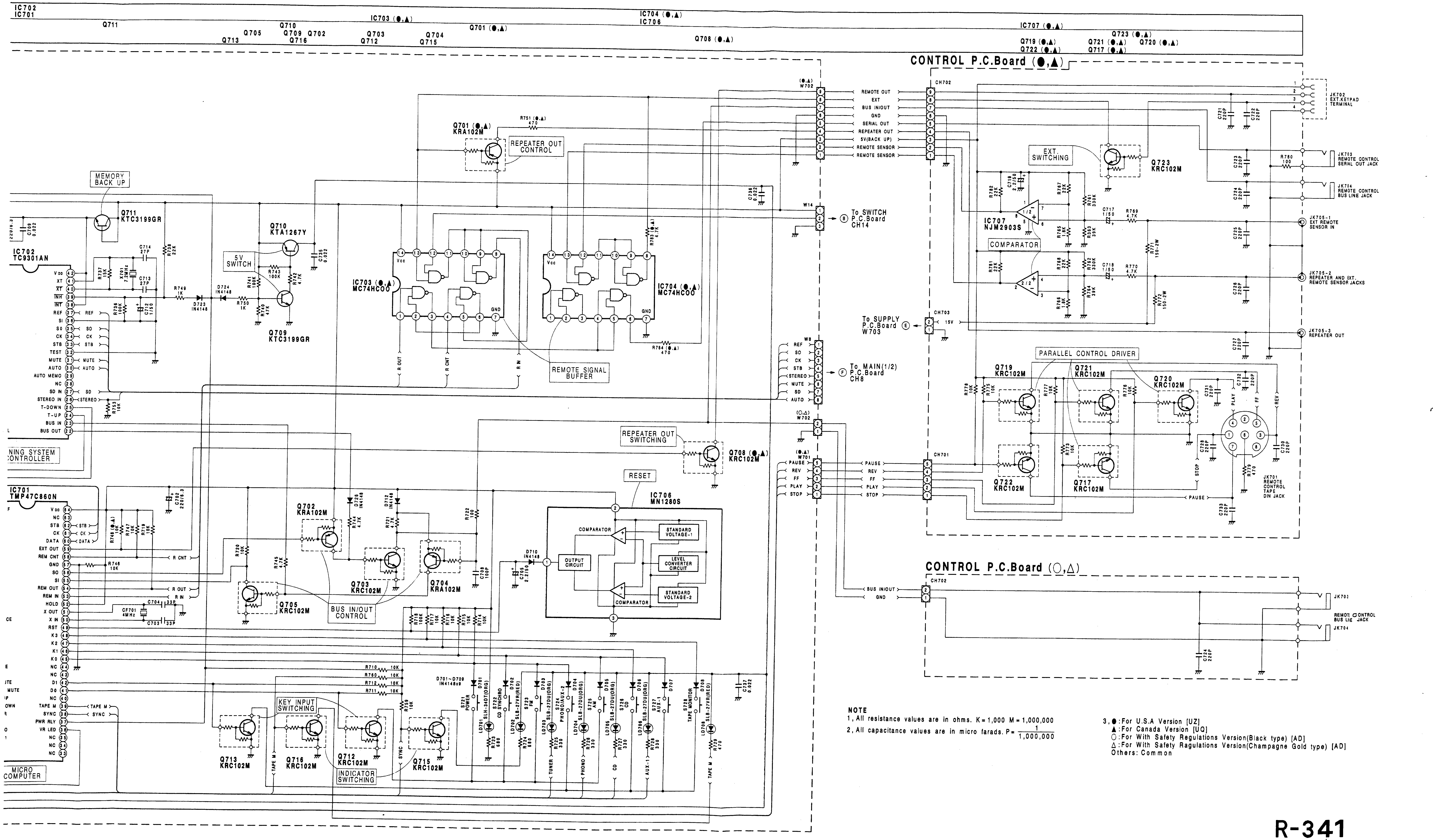
Schematic Diagram (3/3)

IC'S	IC702 IC701			IC703 (●,▲)			IC704 (●,▲) IC706
TRANSISTORS (Q)	Q711	Q705 Q713	Q710 Q709 Q702 Q716	Q703 Q712	Q704 Q715	Q701 (●,▲)	Q708 (●,▲)


DISPLAY P.C.Board
FL701 FL DISPLAY
To SUPPLY P.C.Board CH801 Ⓓ
W801
F1
F2
-V FL
PWR RLY
5V(BACK UP)
MEMORY BACK UP
Q711 KTC3199GR
R732 1K
C711 0.022/5.5
C710 220/6.3
C709 0.022
IC702 TC9301AN
TUNING SYSTEM CONTROLLER
GND
K0 K1 K2 K3
D0 D1 D2 D3 D4 D5 D6
a b c d e f g h
-V FL
VDD XT XT INH INT REF SI SO CK STB TEST MUTE AUTO AUTO MEMO NC SD IN STEREO IN T-DOWN T-UP BUS IN BUS OUT
C714 27P
C713 27P
X701 7.2MHz
R737 15K
R738 22K
R736 100K
C712 1/50
R749 1K
D723 IN4148
D724 IN4148
R750 1K
R741 100K
R743 100K
R742 4.7K
R740 47K
5V SWITCH
Q710 KTA1267Y
Q709 KTC3199GR
C735 0.022
AUTO SEEK /MANUAL S707
STEREO /MONO S718
10 S706
+10 S711
STORE S715
7 S705
8 S710
9 S714
4 S704
5 S709
6 S713
1 S703
2 S708
3 S712
TUNING DOWN S720
TUNING UP S719
D717 IN4148
D716 IN4148
D722 IN4148
D715 IN4148
D721 (●,▲) IN4148
D714 IN4148
D713 IN4148
S702 (●,▲) (25KHz-200KHz)
D711 (○,△) IN4148
D720 (○,△) IN4148
D720 (●,▲) IN4148
R733 10K
R734 10K
R731 10K
IC703 (●,▲) MC74HC00
IC704 (●,▲) MC74HC00
Vcc
GND
R783 4.7K
R784 (●,▲) 470
R OUT
R CNT
R IN
REMOTE SIGNAL BUFFER
Q701 (●,▲) KRA102M
R751 (●,▲) 470
REPEATER OUT CONTROL
C736 0.022
(●,▲) W702
W14
W8
REF SO CK STB STEREO MUTE SD AUTO
(○,△) W702
REPEATER OUT SWITCHING
Q708 (●,▲) KRC102M
(●,▲) W701
PAUSE REV FF PLAY STOP
RESET
IC706 MN1280S
COMPARATOR
STANDARD VOLTAGE-1
LEVEL CONVERTER CIRCUIT
STANDARD VOLTAGE-2
OUTPUT CIRCUIT
D710 IN4148
C725 2.2/50
R722 10
C708 100P
To MAIN(2/2) P.C.Board CH6 Ⓐ
W6
DATA CK STB
IC701 TMP47C860N
MICRO COMPUTER
VAREF VASS NC CO OFF SOURCE STP PLAY FF REV PAUSE AF MUTE INPUT MUTE VOL UP VOL DOWN TUNER CD PHONO AUX-1 TEST Vss
VDD STB CK DATA EXT OUT REM CNT GND SO SI REM OUT REM IN HOLD X OUT X IN RST K3 K2 K1 K0 D1 D0 TAPE M SYNC PWR RLY VR LED
C702 220/6.3
R748 10K
R747 10K
R719 10K
R746 10K
CF701 4MHz
C704 33P
C703 33P
R703 10K
R708 10K
R709 10K
OFF CD SOURCE
S701 REC OUT SELECTOR
Q702 KRA102M
Q703 KRC102M
Q704 KRA102M
Q705 KRC102M
BUS IN/OUT CONTROL
R744 4.7K
R745 4.7K
R720 10K
R721 4.7K
D725 IN4148
D712 IN4148
R718 100K R717 10K R716 10K R715 10K R714 10K
R710 10K R760 10K R712 10K R711 10K
R759 10K
KEY INPUT SWITCHING
INDICATOR SWITCHING
Q713 KRC102M
Q716 KRC102M
Q712 KRC102M
Q715 KRC102M
D701~D709 IN4148x9
S721 POWER
S722 CD SYNCHRO
S723 FM
S724 PHONO/AUX-2
S725 AM
S726 CD
S727 AUX-1
S728 TAPE MONITOR
LD701 SLH-34DT(ORG)
LD702 SLB-27VR(RED)
LD703 SLB-27DU(ORG)
LD704 SLB-27DU(ORG)
LD705 SLB-27DU(ORG)
LD706 SLB-27DU(ORG)
LD708 SLB-27VR(RED)
R723 680 R724 680 R725 330 R726 330 R727 330 R728 330 R729 470
TAPE M SYNC TUNER PHONO CD AUX-1 TAPE M
C737 0.022
To MAIN(1/2) P.C.Board CH9 Ⓖ
W9
A MUTE VR UP VR DOW I MUTE 5V(SW) 5V(BACK UP)
To VOLUME P.C.Board CH15 Ⓒ
W15
5V(BACK UP) VR LED
C738 22/10
A B C D E F G H
1 2 3 4 5


IC702
IC701
Q711
Q713
Q705
Q710
Q709
Q716
Q702
IC703 (●,▲)
Q703
Q712
Q704
Q715
Q701 (●,▲)
IC704 (●,▲)
IC706
Q708 (●,▲)
IC707 (●,▲)
Q719 (●,▲)
Q722 (●,▲)
Q723 (●,▲)
Q721 (●,▲)
Q717 (●,▲)
Q720 (●,▲)
CONTROL P.C.Board (●,▲)
CONTROL P.C.Board (○,△)
MEMORY BACK UP
Q711 KTC3199GR
IC702 TC9301AN
Q710 KTA1267Y
5V SWITCH
Q709 KTC3199GR
Q701 (●,▲) KRA102M
REPEATER OUT CONTROL
IC703 (●,▲) MC74HC00
IC704 (●,▲) MC74HC00
REMOTE SIGNAL BUFFER
W702
REMOTE OUT
EXT
BUS IN/OUT
GND
SERIAL OUT
REPEATER OUT
5V(BACK UP)
REMOTE SENSOR
REMOTE SENSOR
W14
To SWITCH P.C.Board CH14
W8
REF
SO
CK
STB
STEREO
MUTE
SD
AUTO
To MAIN(1/2) P.C.Board CH8
To SUPPLY P.C.Board W703
CH702
CH703
CH701
JK702 EXT.KEYPAD TERMINAL
JK703 REMOTE CONTROL SERIAL OUT JACK
JK704 REMOTE CONTROL BUS LINE JACK
JK705-1 EXT REMOTE SENSOR IN
JK705-2 REPEATER AND EXT. REMOTE SENSOR JACKS
JK705-3 REPEATER OUT
EXT. SWITCHING
Q723 KRC102M
IC707 NJM2903S
COMPARATOR
PARALLEL CONTROL DRIVER
Q719 KRC102M
Q721 KRC102M
Q720 KRC102M
Q722 KRC102M
Q717 KRC102M
JK701 REMOTE CONTROL TAPE DIN JACK
PAUSE
REV
FF
PLAY
STOP
REPEATER OUT SWITCHING
Q708 (●,▲) KRC102M
RESET
IC706 MN1280S
COMPARATOR
OUTPUT CIRCUIT
STANDARD VOLTAGE-1
LEVEL CONVERTER CIRCUIT
STANDARD VOLTAGE-2
Q702 KRA102M
Q703 KRC102M
Q704 KRA102M
Q705 KRC102M
BUS IN/OUT CONTROL
IC701 TMP47C860N
KEY INPUT SWITCHING
INDICATOR SWITCHING
Q713 KRC102M
Q716 KRC102M
Q712 KRC102M
Q715 KRC102M
D701~D709 IN4148x9
S721 POWER
S722 SYNCHRO
S723 FM
S724 PHONO/AUX-2
S725 AM
S726 CD
S727 AUX-1
S728 TAPE MONITOR
TUNER
PHONO
CD
AUX-1
TAPE M
SYNC
NING SYSTEM CONTROLLER
MICRO COMPUTER
D
E
F
G
H
I
J
K

NOTE

1, All resistance values are in ohms. K = 1,000 M = 1,000,000

2, All capacitance values are in micro farads. P = $\frac{1}{1,000,000}$

3, ●:For U.S.A Version [UZ]
▲:For Canada Version [UQ]
○:For With Safety Regulations Version(Black type) [AD]
△:For With Safety Regulations Version(Champagne Gold type) [AD]
Others: Common

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Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : µF = microfarads, pF = picofarads

Abbreviations

RES. = Resistor
C.F. = Carbon Film
M.F. = Metal Film
M.O. = Metal Oxide Film
M.P. = Metal Plate
TR. = Transistor
TRANS. = Transformer
CP. = Chip
CAP. = Capacitor
ELY. = Electrolytic
CER. = Ceramic
MYL. = Mylar
TAN. = Tantalum
POLY. = Polystyrol
PP. = Polypropylene
PLT. = Polyethylene
PF. = Polyester Film

	Symbol No.	Part No.	Description
	Main P. C. Board		
	IC's		
	IC101	51E09192S01	LA1266
	IC102	51T72226F01	LA3401
	IC103	51E09317S01	NJM2904S
	IC104	51E09193S01	NJM4565SB
	IC105	51E09194S01	TC9172AP
	IC201	51E09193S01	NJM4565SB
	IC401	51E09322S01	TC9164N
	IC403	51T15267W01	LB1641
	IC501	51T67437F01	TA7317P
○	IC601	51E09197S01	NJM78M15A
△	IC601	51E09197S01	NJM78M15A
●	IC601	51E09323S01	NJM78M15FA
▲	IC601	51E09323S01	NJM78M15FA
○	IC602	51E09198S01	NJM79M15A
△	IC602	51E09198S01	NJM79M15A
●	IC602	51E09324S01	NJM79M15FA
▲	IC602	51E09324S01	NJM79M15FA
	IC603	51E09196S01	MC78M12CT
	or	51T53320F01	L78M12
	Transistors		
	Q101	48E09207S01	KTC3193
	or	48S44580J03	2SC1675
	or	48E09208S01	2SC2839
○	Q102	48E09209S01	KTC3198
△	Q102	48E09209S01	KTC3198
○	Q103	48E09209S01	KTC3198
△	Q103	48E09209S01	KTC3198
○	Q105	48E09210S01	KTD1302
△	Q105	48E09210S01	KTD1302
	Q106	48E09210S01	KTD1302
	Q107	48E09209S01	KTC3198
	Q108	48T66948F01	FET, 2SK246
	Q109	48E09209S01	KTC3198
	Q110	48E09211S01	KTA1266
	Q111	48E09211S01	KTA1266
	Q112	48E09209S01	KTC3198
	Q113	48E09209S01	KTC3198
	Q114	48E09211S01	KTA1266
	Q115	48E09209S01	KTC3198
	Q116	48E09209S01	KTC3198
	Q117	48E09209S01	KTC3198
	Q118	48E09211S01	KTA1266
	Q119	48E09210S01	KTD1302
	Q120	48E09210S01	KTD1302
	Q401	48E09224S01	2SC3327
	or	48E09225S01	2SD2144
	Q402	48E09224S01	2SC3327
	or	48E09225S01	2SD2144
	Q405	48E09224S01	2SC3327
	or	48E09225S01	2SD2144
	Q406	48E09224S01	2SC3327
	or	48E09225S01	2SD2144
	Q409	48E09211S01	KTA1266
	Q410	48E09211S01	KTA1266
	Q501	48E09215S01	2SA1239
	Q502	48E09215S01	2SA1239
	Q503	48E09223S01	KTC3200
	Q504	48E09223S01	KTC3200
	Q505	48E09219S01	KTA949
	or	48T72888F01	2SA1208
	Q506	48E09219S01	KTA949
	or	48T72888F01	2SA1208
	Q507	48E09220S01	KTC3206
	or	48E09221S01	KTC2229
	or	48E09222S01	2SC2910
	Q508	48E09220S01	KTC3206
	or	48E09221S01	KTC2229
	or	48E09222S01	2SC2910
	Q509	48T72889F01	2SD1682
	Q510	48T72889F01	2SD1682
	Q511	48E08018S01	2SD600
	Q512	48E08018S01	2SD600
	Q513	48E08019S01	2SB631
	Q514	48E08019S01	2SB631
○	Q515	48E09616S01	2SD1046
△	Q515	48E09616S01	2SD1046

Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

Symbol No.		Part No.	Description
●	Q515	48E08016S03	2SC4467
▲	Q515	48E08016S03	2SC4467
○	Q516	48E09616S01	2SD1046
△	Q516	48E09616S01	2SD1046
●	Q516	48E08016S03	2SC4467
▲	Q516	48E08016S03	2SC4467
○	Q517	48E09617S01	2SB816
△	Q517	48E09617S01	2SB816
●	Q517	48E08017S03	2SA1694
▲	Q517	48E08017S03	2SA1694
○	Q518	48E09617S01	2SB816
△	Q518	48E09617S01	2SB816
●	Q518	48E08017S03	2SA1694
▲	Q518	48E08017S03	2SA1694
	Q519	48E09223S01	KTC3200
	Q520	48E09223S01	KTC3200
	Q521	48E09216S01	KTA1268
	or	48E09217S01	KTA970
	or	48E09218S01	2SA1016
	Q724	48E09231S01	KRA102M
	or	48E09229S02	DTA114ES

Diodes

Symbol No.		Part No.	Description
	D101	48E04616S01	1N4148
	D102	48E04616S01	1N4148
○	D103	48E04616S01	1N4148
△	D103	48E04616S01	1N4148
○	D104	48E04616S01	1N4148
△	D104	48E04616S01	1N4148
	D106	48E04616S01	1N4148
	D107	48E04616S01	1N4148
	D108	48E04616S01	1N4148
	D109	48E04616S01	1N4148
○	D110	48E04616S01	1N4148
△	D110	48E04616S01	1N4148
	D111	48E04616S01	1N4148
	D501	48E04616S01	1N4148
	D502	48E04616S01	1N4148
	D503	48E04616S01	1N4148
	D504	48E04616S01	1N4148
	D505	48E04616S01	1N4148
	D506	48E04616S01	1N4148
	D515	48E04616S01	1N4148
	D516	48E04616S01	1N4148
	D517	48S40477U02	1N4002
	D519	48E04616S01	1N4148

Symbol No.		Part No.	Description
	D520	48E04616S01	1N4148
	D601	48E08024S01	1N5402
	D602	48E08024S01	1N5402
	D603	48E08024S01	1N5402
	D604	48E08024S01	1N5402
	D605	48S40477U02	1N4002
	D606	48S40477U02	1N4002
	D607	48S40477U02	1N4002
	D608	48S40477U02	1N4002
	D609	48S40477U02	1N4002
	D610	48S40477U02	1N4002
	D611	48S40477U02	1N4002
○	VD101	48E09212S01	Varactor, SVC-321SP
△	VD101	48E09212S01	Varactor, SVC-321SP
	VD102	48E09212S01	Varactor, SVC-321SP
○	VD103	48E09212S01	Varactor, SVC-321SP
△	VD103	48E09212S01	Varactor, SVC-321SP
	VD104	48E09212S01	Varactor, SVC-321SP
	ZD401	48E01750S03	Zener, GZA4.7
	or	48T68699F08	Zener, MTZ4.7

Ceramic Filters / Filter

Symbol No.		Part No.	Description
	CF101	91E09240S01	SFE10.7MS2G
	CF102	91E09240S01	SFE10.7MS2G
	CF103	91E09241S01	SFZ450JL3
	CF104	91E09320S01	BFU450CN4
○	BF101	91E09619S01	Filter, Band Pass
△	BF101	91E09619S01	Filter, Band Pass

Crystal / Coils

Symbol No.		Part No.	Description
	X101	48E04723S01	Crystal, 19KHz
○	L101	24E09618S01	LW ANT
△	L101	24E09618S01	LW ANT
	L102	24E08073S01	MW ANT
○	L103	24E09619S01	LW OSC
△	L103	24E09619S01	LW OSC
	L104	24E09247S01	MW OSC
	L105	24E09248S01	MPX FILTER
	L106	24E09248S01	MPX FILTER
○	L201	24E09620S01	Inductor, 100μH
△	L201	24E09620S01	Inductor, 100μH
○	L202	24E09620S01	Inductor, 100μH
△	L202	24E09620S01	Inductor, 100μH
	L501	24E09245S01	1μH
	L502	24E09245S01	1μH

Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

	Symbol No.	Part No.	Description
	T101	24E09243S01	IFT 450
	T102	24E09244S01	IFT 10.7
○	T103	24E04747S01	ANT BIRDY
△	T103	24E04747S01	ANT BIRDY

Jacks

	Symbol No.	Part No.	Description
●	JK401	09E09251S01	4P RCA (PRE OUT and MAIN IN)
▲	JK401	09E09251S01	4P RCA (PRE OUT and MAIN IN)
	JK402	09E09251S01	4P RCA (SIGNAL PROCESSOR IN and OUT)
	JK403	09E09251S01	4P RCA (TAPE IN and OUT)
	JK404	09E09251S01	4P RCA (CD and AUX - 1 IN)
	JK405	09E09252S01	2P RCA (PHONO / AUX - 2 IN)

Relay

	Symbol No.	Part No.	Description
	RL501	80E09314S01	OSA - SS - 224DM
	or	80E09318S01	OMI - SS - 224LM
	or	80E09315S01	HR - CR323 DC24V

Switch / Thermistor

	Symbol No.	Part No.	Description
	S201	40E09313S01	Slide, SSSF1 (PHONO / AUX-2)
	TH501	48E09280S01	Thermistor, 500 ohm

Capacitors

	Symbol No.	Part No.	Description	
	C101	21E04631S01	CER.,	0.01μF
	C102	21E04631S02	CER.,	0.022μF
	C103	21E04631S01	CER.,	0.01μF
	C105	21E04631S02	CER.,	0.022μF
○	C106	21E04631S02	CER.,	0.022μF
△	C106	21E04631S02	CER.,	0.022μF
	C107	21E04631S02	CER.,	0.022μF
○	C108	21E04736S02	CER.,	27pF
△	C108	21E04736S02	CER.,	27pF
○	C109	21E04736S09	CER.,	39pF
△	C109	21E04736S09	CER.,	39pF
○	C110	08E04656S03	Styrene,	120pF
△	C110	08E04656S03	Styrene,	120pF
	C111	08E04656S02	Styrene,	390pF
	C115	21E04631S02	CER.,	0.022μF
	C116	23E04636S06	ELY.,	10μF / 25V
	C117	23E04636S06	ELY.,	10μF / 25V
○	C118	23E04635S04	ELY.,	0.47μF / 50V
△	C118	23E04635S04	ELY.,	0.47μF / 50V

	Symbol No.	Part No.	Description	
●	C118	23E04635S03	ELY.,	1μF / 50V
▲	C118	23E04635S03	ELY.,	1μF / 50V
	C119	23E04635S04	ELY.,	0.47μF / 50V
○	C121	23E04731S03	ELY.,	4.7μF / 35V
△	C121	23E04731S03	ELY.,	4.7μF / 35V
●	C121	23E04636S06	ELY.,	10μF / 25V
▲	C121	23E04636S06	ELY.,	10μF / 25V
○	C122	23E04635S11	ELY.,	3.3μF / 50V
△	C122	23E04635S11	ELY.,	3.3μF / 50V
●	C122	23E04731S03	ELY.,	4.7μF / 35V
▲	C122	23E04731S03	ELY.,	4.7μF / 35V
	C123	08E04735S09	MYL.,	0.022μF
	C124	21E04631S02	CER.,	0.022μF
	C125	21E04631S02	CER.,	0.022μF
	C126	23E04754S03	ELY.,	100μF / 16V
	C127	21E04631S02	CER.,	0.022μF
○	C128	23E04635S03	ELY.,	1μF / 50V
△	C128	23E04635S03	ELY.,	1μF / 50V
●	C128	23E04635S06	ELY.,	0.1μF / 50V
▲	C128	23E04635S06	ELY.,	0.1μF / 50V
	C129	23E04635S03	ELY.,	1μF / 50V
	C130	21E04622S07	CER.,	33pF
	C131	23E04635S06	ELY.,	0.1μF / 50V
	C132	23E04754S05	ELY.,	47μF / 16V
	C133	08E04735S02	MYL.,	0.047μF
	C134	23E04635S03	ELY.,	1μF / 50V
	C135	23E04635S05	ELY.,	0.22μF / 50V
	C136	23E04731S03	ELY.,	4.7μF / 35V
	C137	23E04635S03	ELY.,	1μF / 50V
	C138	23E04635S03	ELY.,	1μF / 50V
	C139	23E04636S06	ELY.,	10μF / 25V
○	C140	21E04734S14	CER.,	510pF
△	C140	21E04734S14	CER.,	510pF
●	C140	21E04734S13	CER.,	750pF
▲	C140	21E04734S13	CER.,	750pF
○	C141	21E04734S14	CER.,	510pF
△	C141	21E04734S14	CER.,	510pF
●	C141	21E04734S13	CER.,	750pF
▲	C141	21E04734S13	CER.,	750pF
	C142	23E04636S06	ELY.,	10μF / 25V
	C143	23E04636S06	ELY.,	10μF / 25V
	C144	21E04631S01	CER.,	0.01μF
	C145	21E04361S02	CER.,	0.022μF
	C146	23E04636S06	ELY.,	10μF / 25V
	C147	23E04635S04	ELY.,	0.47μF / 50V
○	C148	21E04631S04	CER.,	0.047μF
△	C148	21E04631S04	CER.,	0.047μF
●	C148	23E04635S03	ELY.,	1μF / 50V
▲	C148	23E04635S03	ELY.,	1μF / 50V

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Symbol No.		Part No.	Description	
	C149	23E04636S06	ELY.,	10μF/25V
	C150	23E04636S06	ELY.,	10μF/25V
	C151	08E04735S04	MYL.,	1000pF
○	C154	21E04631S06	CER.,	1000pF
△	C154	21E04631S06	CER.,	1000pF
	C155	21E04631S06	CER.,	1000pF
○	C156	21E04631S08	CER.,	4700pF
△	C156	21E04631S08	CER.,	4700pF
●	C156	21E04631S06	CER.,	1000pF
▲	C156	21E04631S06	CER.,	1000pF
○	C157	21E04631S04	CER.,	0.047μF
△	C157	21E04631S04	CER.,	0.047μF
	C201	23E04731S03	ELY.,	4.7μF/35V
	C202	23E04731S03	ELY.,	4.7μF/35V
○	C203	21E04622S25	CER.,	1200pF
△	C203	21E04622S25	CER.,	1200pF
●	C203	21E04622S09	CER.,	680pF
▲	C203	21E04622S09	CER.,	680pF
○	C204	21E04622S25	CER.,	1200pF
△	C204	21E04622S25	CER.,	1200pF
●	C204	21E04622S09	CER.,	680pF
▲	C204	21E04622S09	CER.,	680pF
	C207	21E04622S08	CER.,	330pF
	C208	21E04622S08	CER.,	330pF
	C209	08E04735S01	MYL.,	0.012μF
	C210	08E04735S01	MYL.,	0.012μF
	C211	08E04735S13	MYL.,	3300pF
	C212	08E04735S13	MYL.,	3300pF
○	C213	08E04654S11	Plastic,	1μF
△	C213	08E04654S11	Plastic,	1μF
●	C213	23E04635S03	ELY.,	1μF/50V
▲	C213	23E04635S03	ELY.,	1μF/50V
○	C214	08E04654S11	Plastic,	1μF
△	C214	08E04654S11	Plastic,	1μF
●	C214	23E04635S03	ELY.,	1μF/50V
▲	C214	23E04635S03	ELY.,	1μF/50V
	C215	23E04636S02	ELY.,	22μF/25V
	C216	23E04636S02	ELY.,	22μF/25V
○	C217	21E04631S02	CER.,	0.022μF
△	C217	21E04631S02	CER.,	0.022μF
○	C401	21E04622S16	CER.,	680pF
△	C401	21E04622S16	CER.,	680pF
○	C402	21E04622S16	CER.,	680pF
△	C402	21E04622S16	CER.,	680pF
○	C403	21E04622S16	CER.,	680pF
△	C403	21E04622S16	CER.,	680pF
○	C404	21E04622S16	CER.,	680pF
△	C404	21E04622S16	CER.,	680pF
	C411	21E04622S16	CER.,	680pF
	C412	21E04622S16	CER.,	680pF
○	C413	21E04622S15	CER.,	330pF
△	C413	21E04622S15	CER.,	330pF
●	C413	21E04622S13	CER.,	56pF
▲	C413	21E04622S13	CER.,	56pF
○	C414	21E04622S15	CER.,	330pF
△	C414	21E04622S15	CER.,	330pF
●	C414	21E04622S13	CER.,	56pF
▲	C414	21E04622S13	CER.,	56pF
	C415	21E04622S13	CER.,	56pF
	C416	21E04622S13	CER.,	56pF
	C418	23E04754S09	ELY.,	330μF/16V
●	C419	21E04622S14	CER.,	100pF
▲	C419	21E04622S14	CER.,	100pF
●	C420	21E04622S14	CER.,	100pF
▲	C420	21E04622S14	CER.,	100pF
	C423	08E04735S05	MYL.,	0.01μF
	C424	08E04654S09	Plastic,	0.1μF
	C425	21E04631S02	CER.,	0.022μF
	C426	21E04631S02	CER.,	0.022μF
	C427	21E04622S15	CER.,	330pF
	C428	21E04622S15	CER.,	330pF
	C429	21E04622S15	CER.,	330pF
	C501	08E04654S11	Plastic,	1μF
	C502	08E04654S11	Plastic,	1μF
	C503	21E04622S12	CER.,	100pF
	C504	21E04622S12	CER.,	100pF
	C505	08E04735S11	MYL.,	2200pF
	C506	08E04735S11	MYL.,	2200pF
	C507	21E04622S10	CER.,	10pF
	C508	21E04622S10	CER.,	10pF
○	C509	23E04636S02	ELY.,	22μF/25V
△	C509	23E04636S02	ELY.,	22μF/25V
●	C509	23E06052S03	ELY.,	100μF/10V
▲	C509	23E06052S03	ELY.,	100μF/10V
○	C510	23E04636S02	ELY.,	22μF/25V
△	C510	23E04636S02	ELY.,	22μF/25V
●	C510	23E06052S03	ELY.,	100μF/10V
▲	C510	23E06052S03	ELY.,	100μF/10V
	C511	21E04734S08	CER.,	220pF
	C512	21E04734S08	CER.,	220pF
	C513	08E04735S02	MYL.,	0.047μF
	C514	08E04735S02	MYL.,	0.047μF
	C515	23E04731S03	ELY.,	4.7μF/35V
	C516	23E04636S07	ELY.,	47μF/25V
	C517	21E04631S01	CER.,	0.01μF
	C518	23E04635S12	ELY.,	22μF/50V
	C519	23E04635S04	ELY.,	0.47μF/50V
	C521	21E04622S11	CER.,	47pF

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Symbol No.		Part No.	Description
	C522	21E04622S11	CER., 47pF
○	C523	23E04636S06	ELY., 10μF/25V
△	C523	23E04636S06	ELY., 10μF/25V
●	C523	23E04635S10	ELY., 10μF/50V
▲	C523	23E04635S10	ELY., 10μF/50V
○	C524	23E04636S06	ELY., 10μF/25V
△	C524	23E04636S06	ELY., 10μF/25V
●	C524	23E04635S10	ELY., 10μF/50V
▲	C524	23E04635S10	ELY., 10μF/50V
○	C525	23E04636S06	ELY., 10μF/25V
△	C525	23E04636S06	ELY., 10μF/25V
●	C525	23E04635S10	ELY., 10μF/50V
▲	C525	23E04635S10	ELY., 10μF/50V
○	C526	23E04636S06	ELY., 10μF/25V
△	C526	23E04636S06	ELY., 10μF/25V
●	C526	23E04635S10	ELY., 10μF/50V
▲	C526	23E04635S10	ELY., 10μF/50V
	C527	21E04622S11	CER., 47pF
	C528	21E04622S11	CER., 47pF
	C601	23E04635S14	ELY., 6800μF/50V
	C602	23E04635S14	ELY., 6800μF/50V
	C603	21E05506S02	CER., 0.022μF
	C604	21E05506S02	CER., 0.022μF
	C605	23E04636S08	ELY., 470μF/25V
	C606	23E04636S08	ELY., 470μF/25V
	C607	23E04636S06	ELY., 10μF/25V
	C608	23E04636S06	ELY., 10μF/25V
	C609	21E04631S04	CER., 0.047μF
	C610	21E04631S04	CER., 0.047μF
	C611	23E04636S05	ELY., 1000μF/25V
	C612	23E04636S06	ELY., 10μF/25V
	C613	23E04635S08	ELY., 2.2μF/50V
○	C626	08E10337S01	Plastic, 0.1μF
△	C626	08E10337S01	Plastic, 0.1μF
○	VC101	20E09268S01	Trimmer, VCT51E
○	or	20E09269S01	Trimmer, CVN5A200
△	VC101	20E09268S01	Trimmer, VCT51E
△	or	20E09269S01	Trimmer, CVN5A200
	VC102	20E09268S01	Trimmer, VCT51E
	or	20E09269S01	Trimmer, CVN5A200
	VC103	20E09268S01	Trimmer, VCT51E
	or	20E09269S01	Trimmer, CVN5A200

Symbol No.		Part No.	Description
Resistors			
	R465	06E04639S08	M.O., 47 ohm 1W
	R519	06E09483S05	Fuse, 100 ohm 1/4W
	R520	06E09483S05	Fuse, 100 ohm 1/4W
	R521	06E09483S05	Fuse, 100 ohm 1/4W
	R522	06E09483S05	Fuse, 100 ohm 1/4W
	R527	06E09483S02	Fuse, 22 ohm 1/4W
	R528	06E09483S02	Fuse, 22 ohm 1/4W
	R529	06E09483S02	Fuse, 22 ohm 1/4W
	R530	06E09483S02	Fuse, 22 ohm 1/4W
	R531	06E09316S01	C.F., 220 ohm 1/2W
	R532	06E09316S01	C.F., 220 ohm 1/2W
	R533	06E09483S01	Fuse, 4.7 ohm 1/4W
	R534	06E09483S01	Fuse, 4.7 ohm 1/4W
	R535	06E09483S01	Fuse, 4.7 ohm 1/4W
	R536	06E09483S01	Fuse, 4.7 ohm 1/4W
	R537	17E04642S01	Cement, 0.22 ohm 5W ×2
	R538	17E04642S01	Cement, 0.22 ohm 5W ×2
	R541	06E04640S01	M.O., 10 ohm 2W
	R542	06E04640S01	M.O., 10 ohm 2W
	R547	06E04639S05	M.O., 4.7 ohm 1W
	R548	06E04639S05	M.O., 4.7 ohm 1W
	R565	06E04639S07	M.O., 470 ohm 1W
	R601	06E09483S04	Fuse, 1 ohm 1/4W
	R602	06E09483S04	Fuse, 1 ohm 1/4W
	VR101	18E09261S01	Variable, 33K ohm
	VR102	18E09262S01	Variable, 47K ohm
	VR104	18E09263S01	Variable, 100K ohm
	VR501	18E09264S01	Variable, 1K ohm
	VR502	18E09264S01	Variable, 1K ohm
Display P. C. Board			
IC's			
	IC701	51E09988S01	TMP47C860N
	IC702	51E09203S01	TC9301AN
●	IC703	51E09204S01	MC74HC00
▲	IC703	51E09204S01	MC74HC00
●	IC704	51E09204S01	MC74HC00
▲	IC704	51E09204S01	MC74HC00
	IC706	51T72309F01	MN1280S

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Symbol No.	Part No.	Description
Transistors		
● Q701	48E09231S01	KRA102M
● or	48E09229S02	DTA114ES
▲ Q701	48E09231S01	KRA102M
▲ or	48E09229S02	DTA114ES
Q702	48E09231S01	KRA102M
or	48E09229S02	DTA114ES
Q703	48E09228S01	KRC102M
or	48E09229S01	DTC114ES
or	48E09230S01	2SC3402
Q704	48E09231S01	KRA102M
or	48E09229S02	DTA114ES
Q705	48E09228S01	KRC102M
or	48E09229S01	DTC114ES
or	48E09230S01	2SC3402
● Q708	48E09228S01	KRC102M
● or	48E09229S01	DTC114ES
▲ Q708	48E09228S01	KRC102M
▲ or	48E09229S01	DTC114ES
Q709	48E09232S01	KTC3199
or	48E09327S01	2SC3330T
Q710	48E09234S01	KTA1267Y
Q711	48E09232S01	KTC3199
or	48E09327S01	2SC3330T
Q712	48E09228S01	KRC102M
or	48E09229S01	DTC114ES
or	48E09230S01	2SC3402
Q713	48E09228S01	KRC102M
or	48E09229S01	DTC114ES
or	48E09230S01	2SC3402
Q715	48E09228S01	KRC102M
or	48E09229S01	DTC114ES
or	48E09230S01	2SC3402
Q716	48E09228S01	KRC102M
or	48E09229S01	DTC114ES
or	48E09230S01	2SC3402
Diodes		
D701	48E04616S01	1N4148
D702	48E04616S01	1N4148
D703	48E04616S01	1N4148
D704	48E04616S01	1N4148
D705	48E04616S01	1N4148

Symbol No.	Part No.	Description
D706	48E04616S01	1N4148
D707	48E04616S01	1N4148
D708	48E04616S01	1N4148
D710	48E04616S01	1N4148
○ D711	48E04616S01	1N4148
△ D711	48E04616S01	1N4148
D712	48E04616S01	1N4148
D713	48E04616S01	1N4148
D714	48E04616S01	1N4148
D715	48E04616S01	1N4148
D716	48E04616S01	1N4148
D717	48E04616S01	1N4148
D718	48E04616S01	1N4148
D720	48E04616S01	1N4148
● D721	48E04616S01	1N4148
▲ D721	48E04616S01	1N4148
D722	48E04616S01	1N4148
D723	48E04616S01	1N4148
D724	48E04616S01	1N4148
D726	48E04616S01	1N4148
Ceramic Filter / Crystal		
CF701	48E09235S01	CSA4.00MG
X701	91E09242S01	Crystal, 7.2MHz
LED's		
LD701	48E09226S01	SLH-34DT (ORG)
LD702	48E09237S01	SLB-27VR (RED)
LD703	48E09236S01	SLB-27DU (ORG)
LD704	48E09236S01	SLB-27DU (ORG)
LD705	48E09236S01	SLB-27DU (ORG)
LD706	48E09236S01	SLB-27DU (ORG)
LD708	48E09237S01	SLB-27VR (RED)
Switches		
S701	40E09328S01	Rotary, SRBV (REC OUT SELECTOR)
● S702	40E09279S01	Slide, SSSS2 (25KHz - 200KHz)
▲ S702	40E09279S01	Slide, SSSS2 (25KHz - 200KHz)
S703	40E09276S01	Key, R663830 (1)
S704	40E09276S01	Key, R663830 (4)
S705	40E09276S01	Key, R663830 (7)

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Symbol No.	Part No.	Description
S706	40E09276S01	Key, R663830 (10)
S707	40E09277S01	Key, R664402 (aute seek / manual)
S708	40E09276S01	Key, R663830 (2)
S709	40E09276S01	Key, R663830 (5)
S710	40E09276S01	Key, R663830 (8)
S711	40E09276S01	Key, R663830 (+10)
S712	40E09276S01	Key, R663830 (3)
S713	40E09276S01	Key, R663830 (6)
S714	40E09276S01	Key, R663830 (9)
S715	40E09277S01	Key, R664402 (store (computer store))
S716	40E09277S01	Key, R664402 (stereo / mono)
S719	40E09276S01	Key, R663830 (TUNING ≫)
S720	40E09276S01	Key, R663830 (TUNING ≪)
S721	40E09276S01	Key, R663830 (POWER)
S722	40E09276S01	Key, R663830 (CD synchro)
S723	40E09276S01	Key, R663830 (FM)
S724	40E09276S01	Key, R663830 (PHONO / AUX - 2)
S725	40E09276S01	Key, R663830 (AM)
S726	40E09276S01	Key, R663830 (CD)
S727	40E09276S01	Key, R663830 (AUX - 1)
S728	40E09276S01	Key, R663830 (tape monitor)
Capacitors		
C702	23E09272S01	ELY., 220μF / 6.3V
C703	21E04736S08	CER., 33pF
C704	21E04736S08	CER., 33pF
C705	23E09271S02	ELY., 2.2μF / 50V
C708	21E04734S10	CER., 100pF
C709	21E04631S02	CER., 0.022μF
C710	23E09272S01	ELY., 220μF / 6.3V
C711	23E09273S02	ELY., 0.022μF / 5.5V
C712	23E09271S01	ELY., 1μF / 50V
C713	21E04736S02	CER., 27pF
C714	21E04736S02	CER., 27pF
C735	21E04622S20	CER., 0.022μF
C736	21E04622S20	CER., 0.022μF
C737	21E04622S20	CER., 0.022μF
C738	23E09270S01	ELY., 22μF / 10V

	Symbol No.	Part No.	Description
	Supply P. C. Board		
	IC's		
●	IC604	51E09201S01	MC78M15CT
●	or	51T68838F01	L78M15
▲	IC604	51E09201S01	MC78M15CT
▲	or	51T68838F01	L78M15
	IC605	51E09199S01	MC78M05CT
	or	51E09200S01	L78M05
	Transistor		
	Q601	48E09209S01	KTC3198
	Diodes		
	D612	48S40477U02	1N4002
	D613	48S40477U02	1N4002
	D614	48S40477U02	1N4002
	D615	48S40477U02	1N4002
	D616	48S40477U02	1N4002
	D622	48S40477U02	1N4002
	ZD620	48E01750S04	Zener, GZA5.6
	or	48T68699F13	Zener, MTZ5.6
	ZD621	48E01750S05	Zener, GZA22
	or	48E09227S01	Zener, MTZ22
	Relay		
	RL601	80E09286S01	OMIT - SS-112LM
	or	80E09287S01	OMI - SS-224LM
	Capacitors		
	C614	08E04663S01	Line, 0.01μF
	C615	21E04631S04	CER., 0.047μF
	C616	21E04631S04	CER., 0.047μF
●	C617	23E04731S04	ELY., 100μF / 35V
▲	C617	23E04731S04	ELY., 100μF / 35V
●	C618	23E04635S10	ELY., 10μF / 50V
▲	C618	23E04635S10	ELY., 10μF / 50V
	C619	23E04636S04	ELY., 220μF / 25V
	C620	23E04635S10	ELY., 10μF / 50V
	C621	21E04631S01	CER., 0.01μF

Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

Symbol No.	Part No.	Description
C622	23E04636S07	ELY., 47μF/25V
○ C623	21E04631S02	CER., 0.022μF
△ C623	21E04631S02	CER., 0.022μF
○ C624	21E04631S02	CER., 0.022μF
△ C624	21E04631S02	CER., 0.022μF
○ C625	21E04631S02	CER., 0.022μF
△ C625	21E04631S02	CER., 0.022μF
○ C801	08E04663S01	Line, 0.01μF
△ C801	08E04663S01	Line, 0.01μF

Resistors

Symbol No.	Part No.	Description
● R604	06E05508S09	C.F., 3.3M ohm 1/2W
▲ R604	06E05508S09	C.F., 3.3M ohm 1/2W
R605	06E04639S06	M.O., 270 ohm 1W
R609	06E05508S03	C.F., 1K ohm 1/2W
R610	06E09483S04	Fuse, 1 ohm 1/4W

Control P. C. Board

IC

Symbol No.	Part No.	Description
● IC707	51E09202S01	NJM2903S
▲ IC707	51E09202S01	NJM2903S

Transistors

Symbol No.	Part No.	Description
● Q717	48E09228S01	KRC102M
● or	48E09229S01	DTC114ES
● or	48E09230S01	2SC3402
▲ Q717	48E09228S01	KRC102M
▲ or	48E09229S01	DTC114ES
▲ or	48E09230S01	2SC3402
● Q719	48E09228S01	KRC102M
● or	48E09229S01	DTC114ES
● or	48E09230S01	2SC3402
▲ Q719	48E09228S01	KRC102M
▲ or	48E09229S01	DTC114ES
▲ or	48E09230S01	2SC3402
● Q720	48E09228S01	KRC102M
● or	48E09229S01	DTC114ES
● or	48E09230S01	2SC3402
▲ Q720	48E09228S01	KRC102M
▲ or	48E09229S01	DTC114ES
▲ or	48E09230S01	2SC3402

Symbol No.	Part No.	Description
● Q721	48E09228S01	KRC102M
● or	48E09229S01	DTC114ES
● or	48E09230S01	2SC3402
▲ Q721	48E09228S01	KRC102M
▲ or	48E09229S01	DTC114ES
▲ or	48E09230S01	2SC3402
● Q722	48E09228S01	KRC102M
● or	48E09229S01	DTC114ES
● or	48E09230S01	2SC3402
▲ Q722	48E09228S01	KRC102M
▲ or	48E09229S01	DTC114ES
▲ or	48E09230S01	2SC3402
● Q723	48E09228S01	KRC102M
● or	48E09229S01	DTC114ES
● or	48E09230S01	2SC3402
▲ Q723	48E09228S01	KRC102M
▲ or	48E09229S01	DTC114ES
▲ or	48E09230S01	2SC3402

Jacks

Symbol No.	Part No.	Description
● JK701	09E09256S01	Remote Control Tape DIN Jack
▲ JK701	09E09256S01	Remote Control Tape DIN Jack
● JK702	09E09257S01	EXT. Keypad Terminal
▲ JK702	09E09257S01	EXT. Keypad Terminal
○ JK703	09E09258S01	Remote Control BUS Line Jack
△ JK703	09E09258S01	Remote Control BUS Line Jack
● JK703	09E09259S01	Remote Control Serial Out Jack
▲ JK703	09E09259S01	Remote Control Serial Out Jack
JK704	09E09258S01	Remote Control BUS Line Jack
● JK705	09E09326S01	Repeater and EXT. Remote Sensor Jacks
▲ JK705	09E09326S01	Repeater and EXT. Remote Sensor Jacks

Capacitors

Symbol No.	Part No.	Description
● C717	23E04635S03	ELY., 1μF/50V
▲ C717	23E04635S03	ELY., 1μF/50V
● C718	23E04635S03	ELY., 1μF/50V
▲ C718	23E04635S03	ELY., 1μF/50V
● C719	23E04635S08	ELY., 2.2μF/50V
▲ C719	23E04635S08	ELY., 2.2μF/50V
● C721	21E04622S18	CER., 220pF
▲ C721	21E04622S18	CER., 220pF
● C722	21E04622S18	CER., 220pF
▲ C722	21E04622S18	CER., 220pF

Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

Symbol No.	Part No.	Description
● C723	21E04622S18	CER., 220pF
▲ C723	21E04622S18	CER., 220pF
C724	21E04622S18	CER., 220pF
● C725	21E04622S18	CER., 220pF
▲ C725	21E04622S18	CER., 220pF
● C726	21E04622S18	CER., 220pF
▲ C726	21E04622S18	CER., 220pF
● C727	21E04622S18	CER., 220pF
▲ C727	21E04622S18	CER., 220pF
● C728	21E04622S18	CER., 220pF
▲ C728	21E04622S18	CER., 220pF
● C730	21E04622S18	CER., 220pF
▲ C730	21E04622S18	CER., 220pF
● C731	21E04622S18	CER., 220pF
▲ C731	21E04622S18	CER., 220pF
● C732	21E04622S18	CER., 220pF
▲ C732	21E04622S18	CER., 220pF
● C733	21E04622S18	CER., 220pF
▲ C733	21E04622S18	CER., 220pF

Resistors

Symbol No.	Part No.	Description
● R771	06E04640S05	M.O., 150 ohm 2W
▲ R771	06E04640S05	M.O., 150 ohm 2W
● R772	06E04640S05	M.O., 150 ohm 2W
▲ R772	06E04640S05	M.O., 150 ohm 2W

Switch P. C. Board

IC

Symbol No.	Part No.	Description
IC304	51E09206S01	GP1U501X

Switch

Symbol No.	Part No.	Description
S301	40E09274S01	Push (loudness)

Capacitors

Symbol No.	Part No.	Description
C309	21E04622S19	CER., 270pF
C310	21E04622S19	CER., 270pF
C311	08E04735S02	MYL., 0.047μF
C312	08E04735S02	MYL., 0.047μF
C707	21E04737S02	CER., 0.022μF

Tone P. C. Board

IC's

Symbol No.	Part No.	Description
IC302	51E09193S01	NJM4565SB
IC303	51E09193S01	NJM4565SB

Capacitors

Symbol No.	Part No.	Description
○ C301	21E04622S10	CER., 10pF
△ C301	21E04622S10	CER., 10pF
○ C302	21E04622S10	CER., 10pF
△ C302	21E04622S10	CER., 10pF
C313	23E04635S08	ELY., 2.2μF / 50V
C314	23E04635S08	ELY., 2.2μF / 50V
C315	23E04635S08	ELY., 2.2μF / 50V
C316	23E04635S08	ELY., 2.2μF / 50V
○ C319	21E04622S12	CER., 100pF
△ C319	21E04622S12	CER., 100pF
○ C320	21E04622S12	CER., 100pF
△ C320	21E04622S12	CER., 100pF
C321	21E04622S12	CER., 100pF
C322	21E04622S12	CER., 100pF
C325	08E04735S01	MYL., 0.012μF
C326	08E04735S01	MYL., 0.012μF
C327	08E04654S10	Plastic, 0.15μF
C328	08E04654S10	Plastic, 0.15μF
C329	21E04622S12	CER., 100pF
C330	21E04622S12	CER., 100pF
C331	23E04731S03	ELY., 4.7μF / 35V
C332	23E04731S03	ELY., 4.7μF / 35V
C333	21E04622S12	CER., 100pF
C334	21E04622S12	CER., 100pF
C335	23E04636S02	ELY., 22μF / 25V
C336	23E04636S02	ELY., 22μF / 25V
C337	23E04636S02	ELY., 22μF / 25V
C338	23E04636S02	ELY., 22μF / 25V

Resistors

Symbol No.	Part No.	Description
VR302	18E09266S01	Volume, Rotary 100K ohm (balance)
VR303	18E09267S01	Volume, Rotary 10K ohm (bass)
VR304	18E09267S01	Volume, Rotary 10K ohm (treble)

Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

Symbol No.		Part No.	Description	
Speaker Switch P. C. Board				
Jack / Switch				
	JK901	09E09254S01	Phones Jack	
	S901	40E09275S01	Switch, Push (speakers A / B)	
Capacitors				
	C901	21E04631S02	CER.,	0.022μF
○	C902	21E04622S26	CER.,	560pF
△	C902	21E04622S26	CER.,	560pF
○	C903	21E04622S26	CER.,	560pF
△	C903	21E04622S26	CER.,	560pF
Resistors				
	R901	06E04640S04	M.O., 270 ohm	2W
	R902	06E04640S04	M.O., 270 ohm	2W
Speaker Terminal P. C. Board				
Capacitors				
○	C904	21E04631S02	CER.,	0.022μF
△	C904	21E04631S02	CER.,	0.022μF
○	C905	21E04631S02	CER.,	0.022μF
△	C905	21E04631S02	CER.,	0.022μF
○	C906	21E04631S02	CER.,	0.022μF
△	C906	21E04631S02	CER.,	0.022μF
○	C907	21E04631S02	CER.,	0.022μF
△	C907	21E04631S02	CER.,	0.022μF
○	C908	21E04631S09	CER.,	2200pF
△	C908	21E04631S09	CER.,	2200pF
●	C908	21E04631S04	CER.,	0.047μF
▲	C908	21E04631S04	CER.,	0.047μF
○	C909	21E04631S09	CER.,	2200pF
△	C909	21E04631S09	CER.,	2200pF
●	C909	21E04631S04	CER.,	0.047μF
▲	C909	21E04631S04	CER.,	0.047μF

Symbol No.		Part No.	Description
Miscellaneous			
○	ET101	09E09754S01	FM / AM Antenna Terminal
△	ET101	09E09754S01	FM / AM Antenna Terminal
●	ET101	09E09249S01	FM / AM Antenna Terminal
▲	ET101	09E09249S01	FM / AM Antenna Terminal
○	ET901	09E09755S01	Speakers A and B Terminal
△	ET901	09E09755S01	Speakers A and B Terminal
●	ET901	09E09255S01	Speakers A and B Terminals
▲	ET901	09E09255S01	Speakers A and B Terminals
○	F601	65E09767S01	Fuse, 250V-2A
△	F601	65E09767S01	Fuse, 250V-2A
●	F601	65E09325S01	Fuse, 125V-4A
▲	F601	65E09325S01	Fuse, 125V-4A
○	F602	65E09767S01	Fuse, 250V-2A
△	F602	65E09767S01	Fuse, 250V-2A
	FL701	65E09285S01	FL Display
○	JK801	09E09756S01	AC Outlet
△	JK801	09E09756S01	AC Outlet
●	JK801	09E09260S01	AC Outlet
▲	JK801	09E09260S01	AC Outlet
	LD301	48E09226S01	LED, SLH-34DT (ORG)
○	P801	28E04687S01	AC Power Cord
○	or	28E09758S01	AC Power Cord
△	P801	28E04687S01	AC Power Cord
△	or	28E09758S01	AC Power Cord
●	P801	28E04686S01	AC Power Cord
●	or	28E09288S01	AC Power Cord
▲	P801	28E04686S01	AC Power Cord
▲	or	28E09288S01	AC Power Cord
○	S801	40E09759S01	Voltage Selector Switch
△	S801	40E09759S01	Voltage Selector Switch
○	T601	25E09768S01	Power Transformer
△	T601	25E09768S01	Power Transformer
●	T601	25E09329S01	Power Transformer
▲	T601	25E09329S01	Power Transformer
○	T602	25E09761S01	Power Transformer
△	T602	25E09761S01	Power Transformer
●	T602	25E09281S01	Power Transformer
▲	T602	25E09282S01	Power Transformer
	VR301 M301	18E09265S01	Volume, Rotary 150K ohm (VOLUME, MOTOR : 4.5V-100mA)

Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

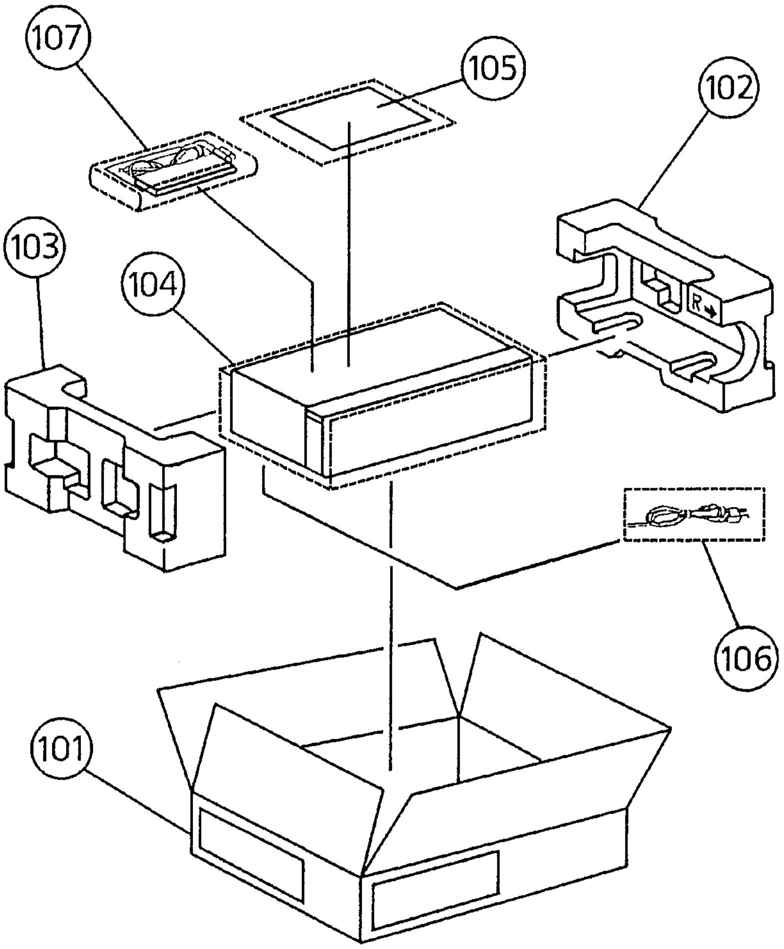
Packing Assembly Parts List

Symbol No.		Part No.	Description
○	101	56E09330S01	Carton, Packing
△	101	56E09621S01	Carton, Packing
●	101	56E09330S01	Carton, Packing
▲	101	56E09330S01	Carton, Packing
	102	56E09290S01	Tray, Packing (R)
	103	56E09290S02	Tray, Packing (L)
	104	56E09291S01	Poly, Bag (Set)
○	105	68P21552W32	Owner's Manual
△	105	68P21552W32	Owner's Manual
●	105	68P21552W30	Owner's Manual
▲	105	68P21552W31	Owner's Manual
	106	56E04783S01	Poly, Bag (AC Cord)

Symbol No.		Part No.	Description
	107-1	60E09294S01	Battery
●	107-2	01E09293S01	DIN Cable (8P)
▲	107-2	01E09293S01	DIN Cable (8P)
	107-3	85E09295S01	AM Loop Antenna
	107-4	85E09332S01	Dipole Antenna
	107-5	01E09484S01	Converter
	107-6	01E09331S01	Remote Control Unit

Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

Packing Method View



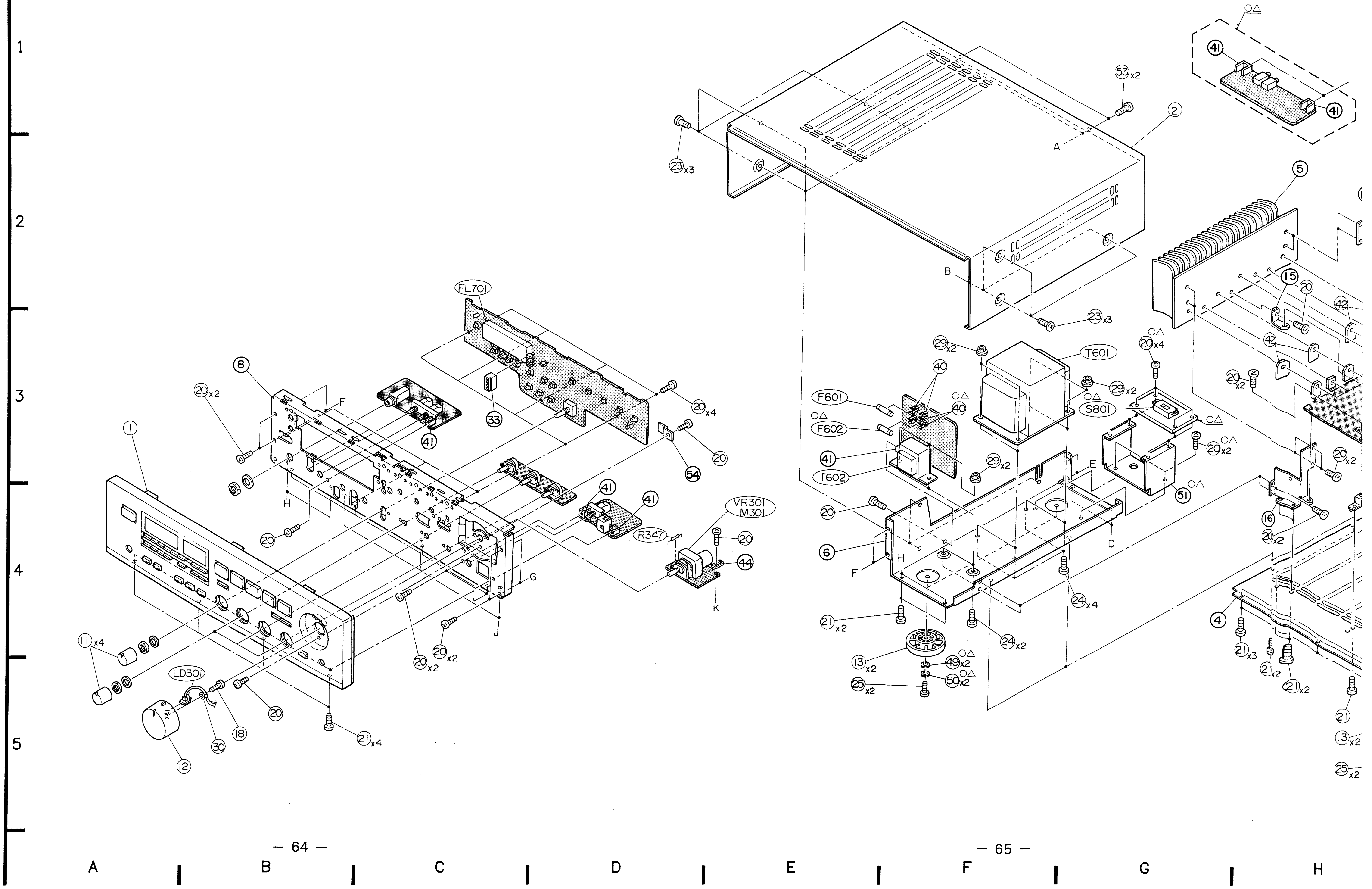
Cabinet Assembly Parts List

Note : The parts without parts list are not supplied.

Symbol	No.	Index	Part No.	Description
○	1	3-A	64E09335S01	Front Panel
△	1	3-A	64E09771S01	Front Panel
●	1	3-A	64E09335S01	Front Panel
▲	1	3-A	64E09335S01	Front Panel
○	2	1-G	15E09298S01	Top Cover
△	2	1-G	15E09769S01	Top Cover
●	2	1-G	15E09298S01	Top Cover
▲	2	1-G	15E09298S01	Top Cover
○	3	1-I	15E09770S01	Rear Panel
△	3	1-I	15E09770S01	Rear Panel
●	3	1-I	15E09333S01	Rear Panel
▲	3	1-I	15E09334S01	Rear Panel
	10	1-J	43E04688S01	Cord Bushing
○	11		36E09302S01	Knob 21
△	11		36E09763S01	Knob 21
●	11		36E09302S01	Knob 21
▲	11		36E09302S01	Knob 21
○	12	5-A	36E09303S01	Knob 25
△	12	5-A	36E09764S01	Knob 25
●	12	5-A	36E09303S01	Knob 25
▲	12	5-A	36E09303S01	Knob 25
○	13		75E08701S01	Foot
△	13		75E08701S01	Foot
●	13		75E09312S01	Foot
▲	13		75E09312S01	Foot
	18	5-B	03E04704S06	Screw, Tap Tite (M2.5 × 6)
	19	2-I	03E04704S02	Screw, Tap Tite (M3 × 10)
	20		03E04704S01	Screw, Tap Tite (M3 × 8)
	21		03E04701S01	Screw, Tap Tite (M3 × 8)
	22	2-K	29E09299S01	Ground Terminal
	23		03E04702S01	Screw, Tap Tite (M4 × 8)
	24		03E04702S05	Screw, Tap Tite (M4 × 12)
	25		03E04701S07	Screw, Tap Tite (M4 × 14)
	26	2-I	04E09306S01	Washer, Spring (M3)
●	27	2-K	05E04709S01	Nylon Rivet (M3 × 4.5)
▲	27	2-K	05E04709S01	Nylon Rivet (M3 × 4.5)
	28		22E09489S01	Jumper Pin
	29		02E06181S01	Nut, Flange (M4)
	30	5-B	29E09486S01	Lug
	32	2-K	07E09487S01	Antenna Holder
	40	3-F	09E09253S01	Fuse Clip
	42		14E09485S01	Insulator, Sheet
○	45	2-I	77E09772S01	FM Front End (FE101)
△	45	2-I	77E09772S01	FM Front End (FE101)
●	45	2-I	77E09239S01	FM Front End (FE101)
▲	45	2-I	77E09239S01	FM Front End (FE101)
	48		03E04701S04	Screw, Tap Tite (M3 × 10)
○	49		04E09765S01	Washer, Plain (M4)
△	49		04E09765S01	Washer, Plain (M4)
○	50		04E09766S01	Washer, Spring (M4)
△	50		04E09766S01	Washer, Spring (M4)
	52	1-J	04E06190S01	Washer, Toothed Lock (M3)
	53	1-G	03E07999S01	Screw, Tap Tite (M3 × 8)

Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

Exploded View (Cabinet)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R347
VR301
M301
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20 x2
11 x4
LD301
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21 x4
29 x2
T601
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○△
40
F601
○△
F602
29 x2
○△
S801
○△
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T602
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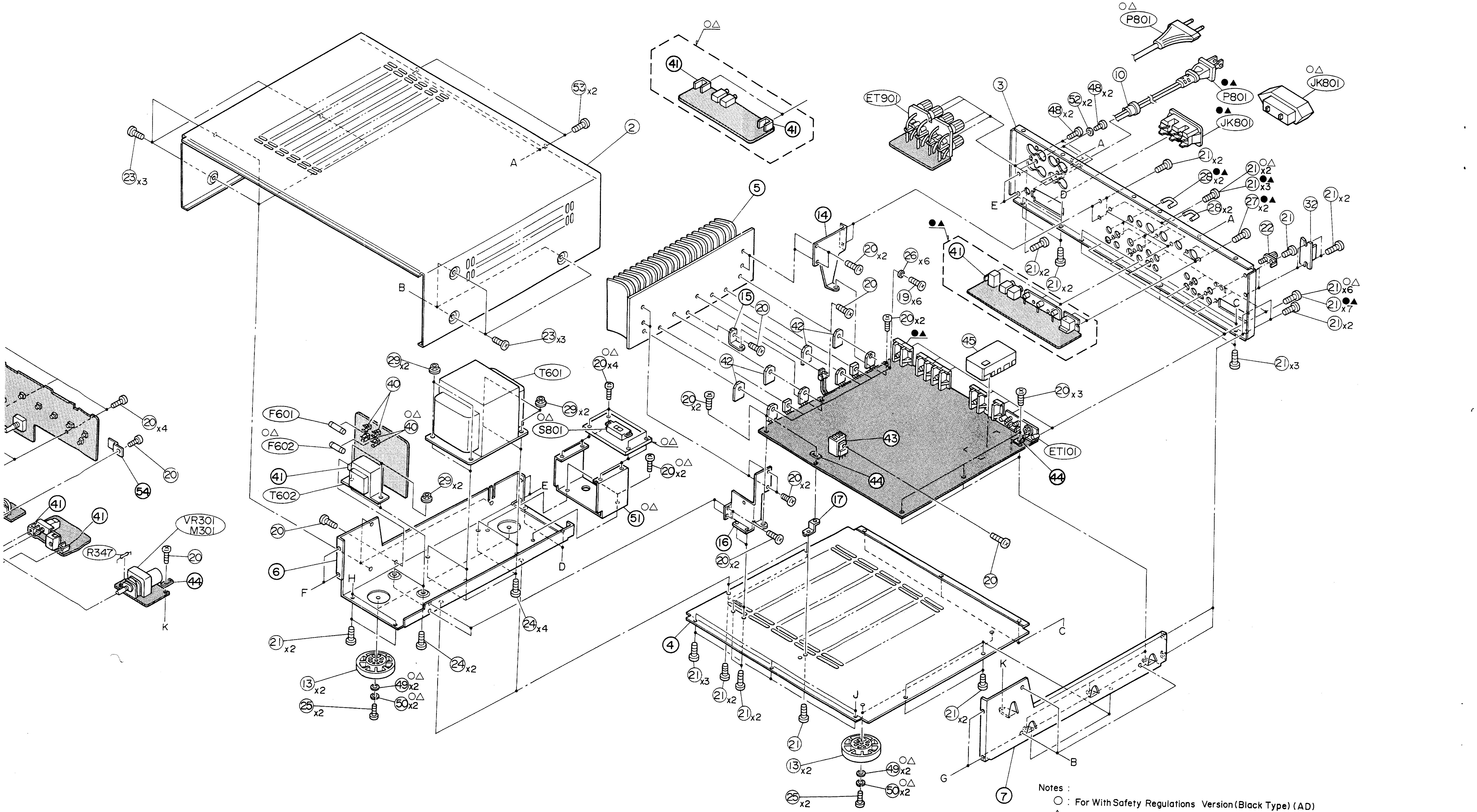
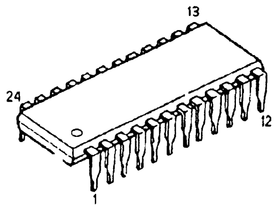
13 x2
25 x2

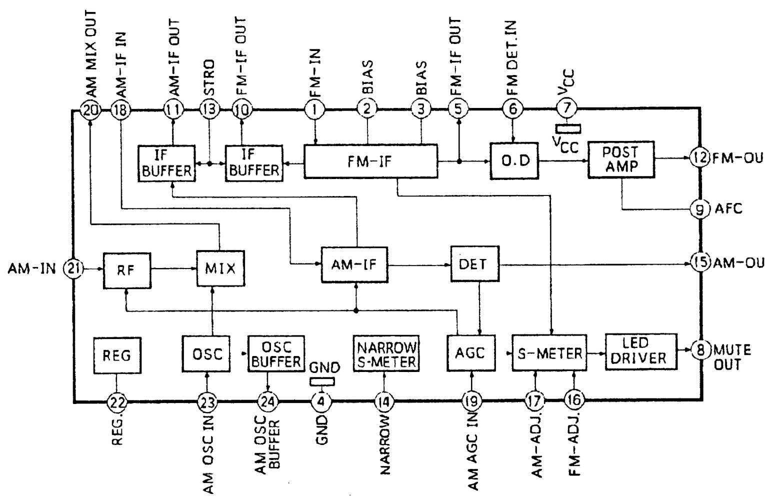

○△
P801
○△
41
41
53 x2
2
23 x3
A
B
23 x3
5
ET901
3
48 x2
52 x2
48 x2
10
●▲
P801
●▲
JK801
○△
JK801
21 x2
21 x2 ○△
28 x2 ●▲
21 x3 ●▲
27 x2 ●▲
28 x2
21 x2
32
22
21
A
D
E
14
20 x2
26 x6
19 x6
20
15
20
42
42
20 x2
●▲
45
20 x3
●▲
41
21 x2
21 x2
21 x6 ○△
21 x7 ●▲
21 x2
C
21 x3
T601
29 x2
29 x2
40
○△
40
F601
○△
F602
41
T602
29 x2
○△
S801
○△
20 x4
○△
20 x2 ○△
51 ○△
E
D
43
44
ET101
44
20 x2
20 x2
17
16
20 x2
20
20 x4
20
54
41
41
VR301
M301
R347
20
44
K
6
F
H
20
21 x2
24 x4
24 x2
13 x2
49 x2 ○△
50 x2 ○△
25 x2
4
21 x3
21 x2
21 x2
21
J
13 x2
49 x2 ○△
50 x2 ○△
25 x2
C
K
21 x2
B
G
7

Notes :
○ : For With Safety Regulations Version (Black Type) (AD)
△ : For With Safety Regulations Version (Champagne Gold Type) (AD)
● : For U.S.A. Version (UZ)
▲ : For Canada Version (UQ)
Others : Common

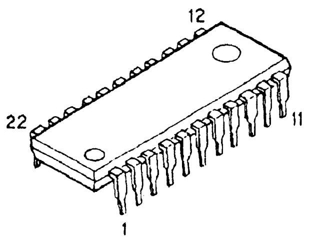
Semi-Conductor Lead Identifications

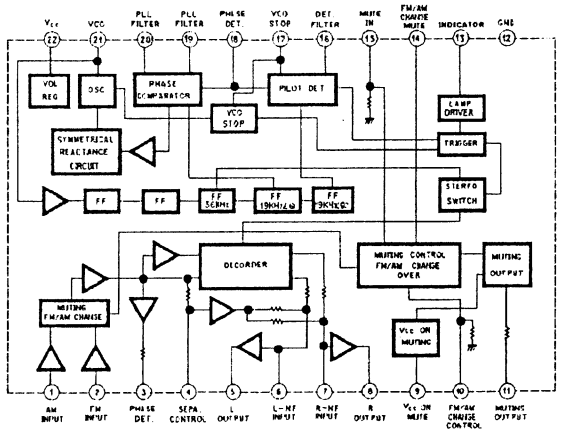
LA1266 : IC101




AM MIX OUT
AM-IF IN
AM-IF OUT
STRO
FM-IF OUT
FM-IN
BIAS
BIAS
FM-IF OUT
FM DET. IN
VCC
IF BUFFER
IF BUFFER
FM-IF
O.D
POST AMP
FM-OUT
AFC
AM-IN
RF
MIX
AM-IF
DET
AM-OUT
REG
OSC
OSC BUFFER
GND
NARROW S-METER
AGC
S-METER
LED DRIVER
MUTE OUT
REG
AM OSC IN
AM OSC BUFFER
GND
NARROW
AM AGC IN
AM-ADJ.
FM-ADJ.

LA3401 : IC102

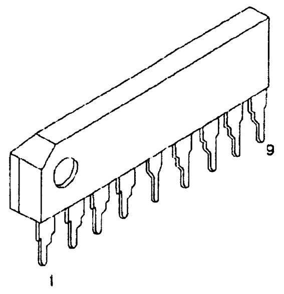


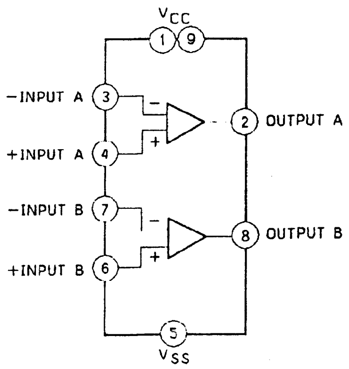

Vcc
VCC
PLL FILTER
PLL FILTER
PHASE DET.
VCO STOP
DET. FILTER
MUTE IN
FM/AM CHANGE MUTE
INDICATOR
GND
VOL REG
OSC
PHASE COMPARATOR
VCO STOP
PILOT DET
LAMP DRIVER
TRIGGER
SYMMETRICAL REACTANCE CIRCUIT
FF
FF
FF 38KHz
FF 19KHz/0
FF 19KHz/0
STEREO SWITCH
DECORDER
MUTING CONTROL FM/AM CHANGE OVER
MUTING OUTPUT
MUTING FM/AM CHANGE
Vcc ON MUTING
AM INPUT
FM INPUT
PHASE DEF.
SEPA. CONTROL
L OUTPUT
L-NF INPUT
R-NF INPUT
R OUTPUT
Vcc ON MUTE
FM/AM CHANGE CONTROL
MUTING OUTPUT

NJM2904S : IC103

NJM4565SB : IC104, 201, 302, 303

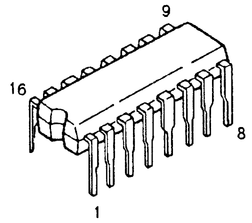
NJM2903S : IC707(●▲)

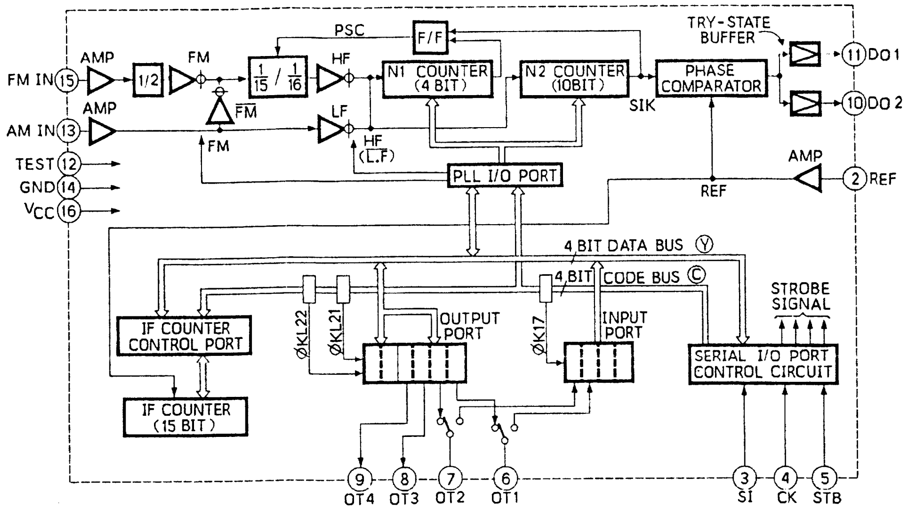



VCC
−INPUT A
+INPUT A
OUTPUT A
−INPUT B
+INPUT B
OUTPUT B
VSS

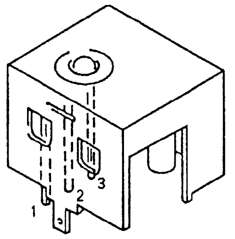
Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

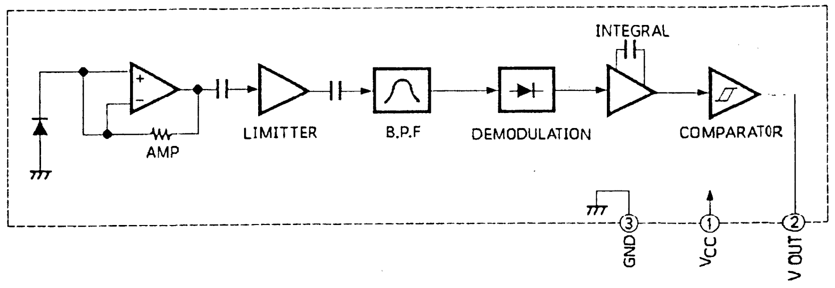
TC9172AP : IC105



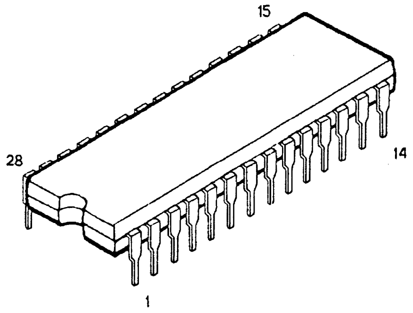

FM IN
AMP
AM IN
AMP
TEST
GND
VCC
1/2
FM
FM
FM
PSC
F/F
1/15 / 1/16
HF
LF
HF (L.F)
N1 COUNTER (4 BIT)
N2 COUNTER (10BIT)
SIK
PHASE COMPARATOR
TRY-STATE BUFFER
DO1
DO2
AMP
REF
REF
PLL I/O PORT
4 BIT DATA BUS Ⓨ
4 BIT CODE BUS Ⓒ
IF COUNTER CONTROL PORT
IF COUNTER (15 BIT)
ØKL22
ØKL21
OUTPUT PORT
ØK17
INPUT PORT
STROBE SIGNAL
SERIAL I/O PORT CONTROL CIRCUIT
OT4
OT3
OT2
OT1
SI
CK
STB

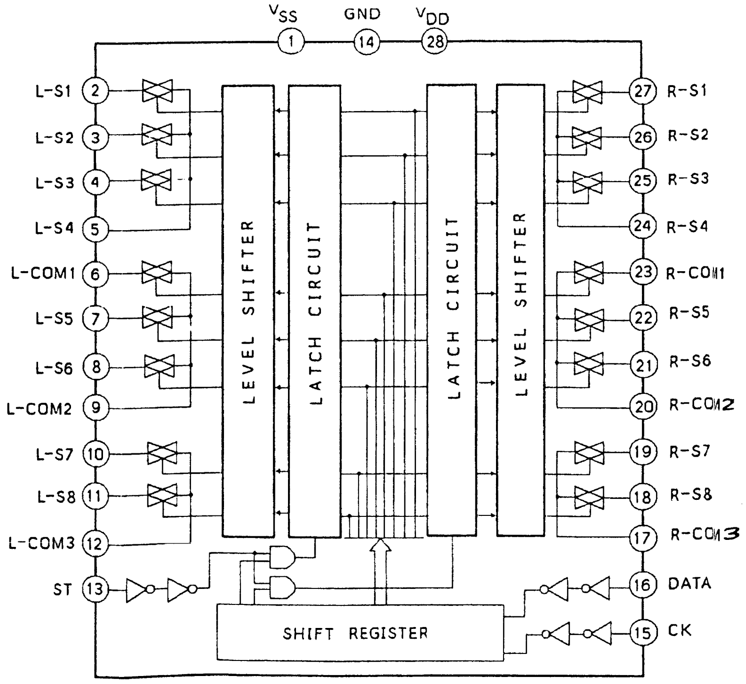
GP1U501X : IC304



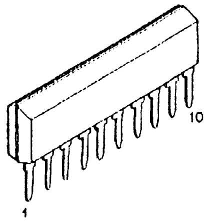

INTEGRAL
AMP
LIMITTER
B.P.F
DEMODULATION
COMPARATOR
GND
VCC
V OUT

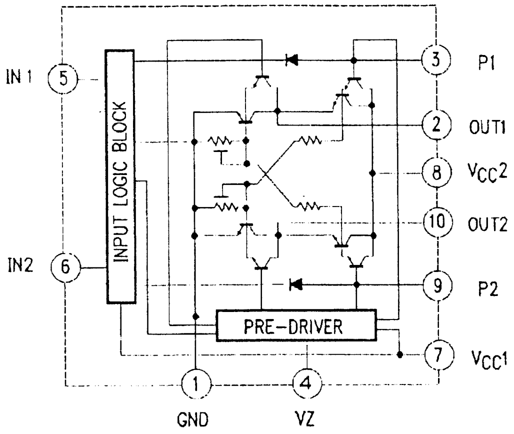
TC9164N : IC401



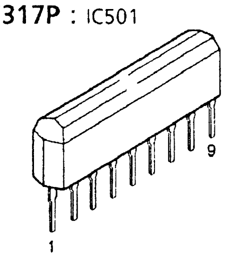

VSS
GND
VDD
L-S1
L-S2
L-S3
L-S4
L-COM1
L-S5
L-S6
L-COM2
L-S7
L-S8
L-COM3
ST
LEVEL SHIFTER
LATCH CIRCUIT
LATCH CIRCUIT
LEVEL SHIFTER
R-S1
R-S2
R-S3
R-S4
R-COM1
R-S5
R-S6
R-COM2
R-S7
R-S8
R-COM3
DATA
CK
SHIFT REGISTER

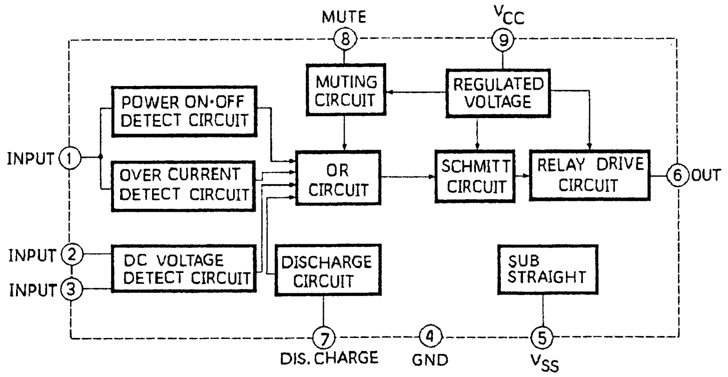
LB1641 : IC403



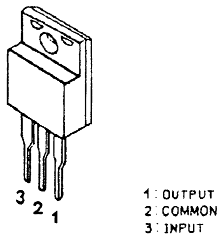

IN1 ⑤
IN2 ⑥
INPUT LOGIC BLOCK
PRE-DRIVER
③ P1
② OUT1
⑧ VCC2
⑩ OUT2
⑨ P2
⑦ VCC1
① GND
④ VZ

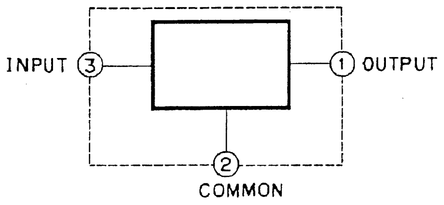
TA7317P : IC501



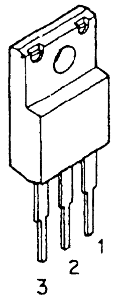

MUTE ⑧
VCC ⑨
POWER ON-OFF DETECT CIRCUIT
MUTING CIRCUIT
REGULATED VOLTAGE
INPUT ①
OVER CURRENT DETECT CIRCUIT
OR CIRCUIT
SCHMITT CIRCUIT
RELAY DRIVE CIRCUIT
⑥ OUT
INPUT ②
INPUT ③
DC VOLTAGE DETECT CIRCUIT
DISCHARGE CIRCUIT
SUB STRAIGHT
⑦ DIS.CHARGE
④ GND
⑤ VSS

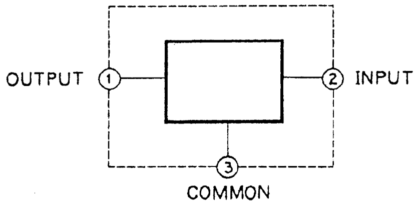
NJM78M15FA : IC601(●▲)
NJM78M15A : IC601(○△)


3
2
1
1: OUTPUT
2: COMMON
3: INPUT


INPUT ③
① OUTPUT
②
COMMON

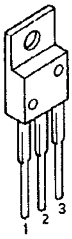
NJM79M15FA : IC602(●▲)
NJM79M15A : IC602(○△)

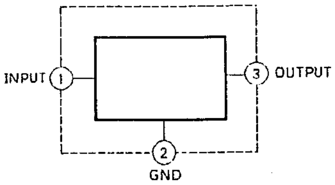



OUTPUT ①
② INPUT
③
COMMON

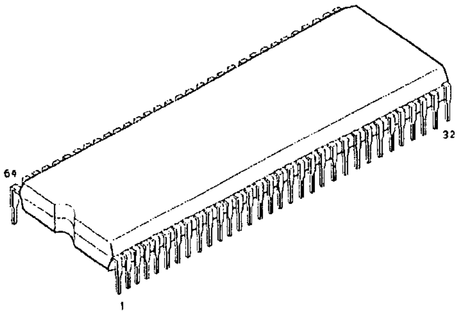
Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

MC78M12CT
L78M12 } IC603
MC78M15CT
L78M15 } IC604(●▲)
MC78M05CT
L78M05 } IC605



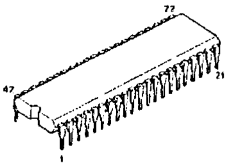

INPUT ①
③ OUTPUT
②
GND

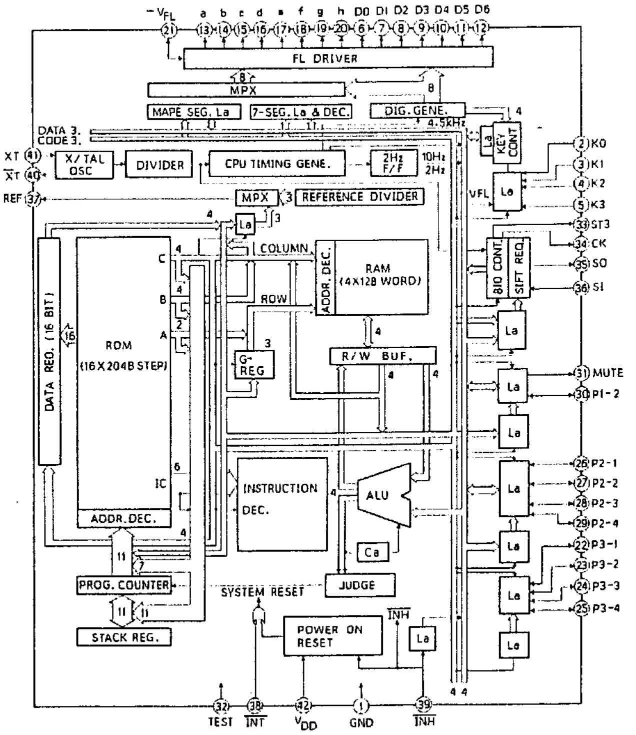
TMP47C860N : IC701



PIN NO.	CORD ADDRESS	I/O	PIN NO.	CORD ADDRESS	I/O	PIN NO.	CORD ADDRESS	I/O
1	VAREF	–	23	AF MUTE	O	45	K0	I
2	VASS	–	24	INPUT MUTE	O	46	K1	I
3	NC	–	25	VOL UP	O	47	K2	I
4	NC	–	26	VOL DOWN	O	48	K3	I
5	NC	–	27	TUNER	O	49	RST	I
6	NC	–	28	CD	O	50	X IN	I
7	NC	–	29	PHONO	O	51	X OUT	O
8	NC	–	30	AUX-1	O	52	HOLD	I
9	CD	I	31	TEST	–	53	REM IN	I
10	NC	–	32	V_{SS}	–	54	REM OUT	O
11	NC	–	33	NC	–	55	SI	I
12	NC	–	34	NC	–	56	SO	O
13	NC	–	35	NC	–	57	GND	–
14	OFF	I	36	VOL LED	O	58	REM CNT	O
15	SOURCE	I	37	PWR PLY	O	59	EXT OUT	O
16	STP	I/O	38	SYNC	O	60	DATA	O
17	PLAY	I/O	39	TAPE-M	O	61	CK	O
18	FF	I/O	40	NC	–	62	STB	O
19	REV	I/O	41	D0	I/O	63	NC	–
20	NC	–	42	D1	I/O	64	V_{DD}	–
21	PAUSE	I/O	43	NC	–			
22	NC	–	44	NC	–			

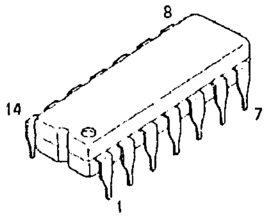
TC9301AN : IC702

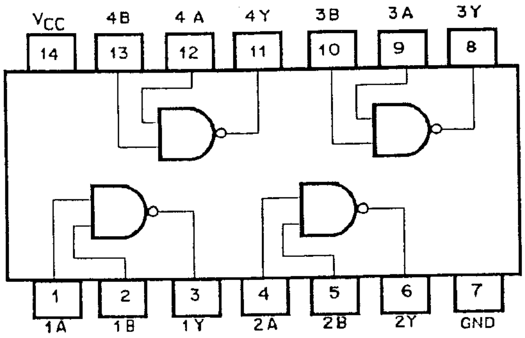



-VFL
a b c d e f g h D0 D1 D2 D3 D4 D5 D6
FL DRIVER
MPX
MAPE SEG. La
7-SEG. La & DEC.
DIG. GENE.
4.5kHz
DATA 3.
CODE 3.
XT ㊶
X̄T ㊵
REF ㊲
X'TAL OSC
DIVIDER
CPU TIMING GENE.
2Hz F/F
10Hz
2Hz
MPX
REFERENCE DIVIDER
La
KEY CONT
VFL
COLUMN
ROW
ADDR. DEC.
RAM (4X128 WORD)
DATA REG. (16 BIT)
ROM (16X2048 STEP)
G-REG
R/W BUF.
810 CONT
SIFT REQ.
INSTRUCTION DEC.
ALU
Ca
JUDGE
ADDR. DEC.
PROG. COUNTER
STACK REG.
SYSTEM RESET
POWER ON RESET
INH
②K0
③K1
④K2
⑤K3
㉝ST3
㉞CK
㉟SO
㊱SI
㉛MUTE
㉚PI-2
㉖P2-1
㉗P2-2
㉘P2-3
㉙P2-4
㉒P3-1
㉓P3-2
㉔P3-3
㉕P3-4
㉜ TEST
㊳ INT
㊷ VDD
① GND
㊴ INH

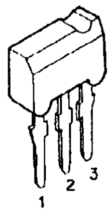
Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.

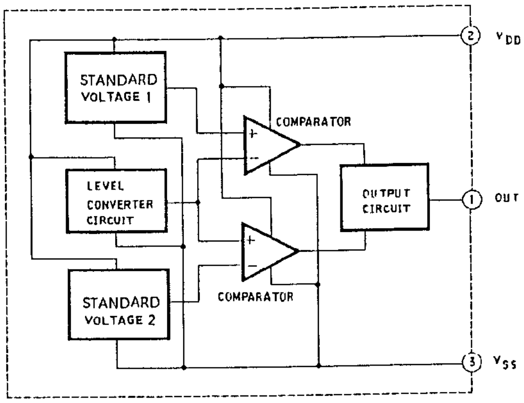
●▲MC74HC00 : IC703, 704




VCC
4B
4 A
4Y
3B
3A
3Y
14
13
12
11
10
9
8
1
2
3
4
5
6
7
1A
1B
1Y
2A
2B
2Y
GND

MN1280S : IC706




STANDARD VOLTAGE 1
LEVEL CONVERTER CIRCUIT
STANDARD VOLTAGE 2
COMPARATOR
COMPARATOR
OUTPUT CIRCUIT
② VDD
① OUT
③ VSS

Notes : ○ : For With Safty Regulations Version (Black Type) [AD],
△ : For With Safty Regulations Version (Champagne Gold Type) [AD],
● : For U.S.A. Version [UZ], ▲ : For Canada Version [UQ], Others : Common.